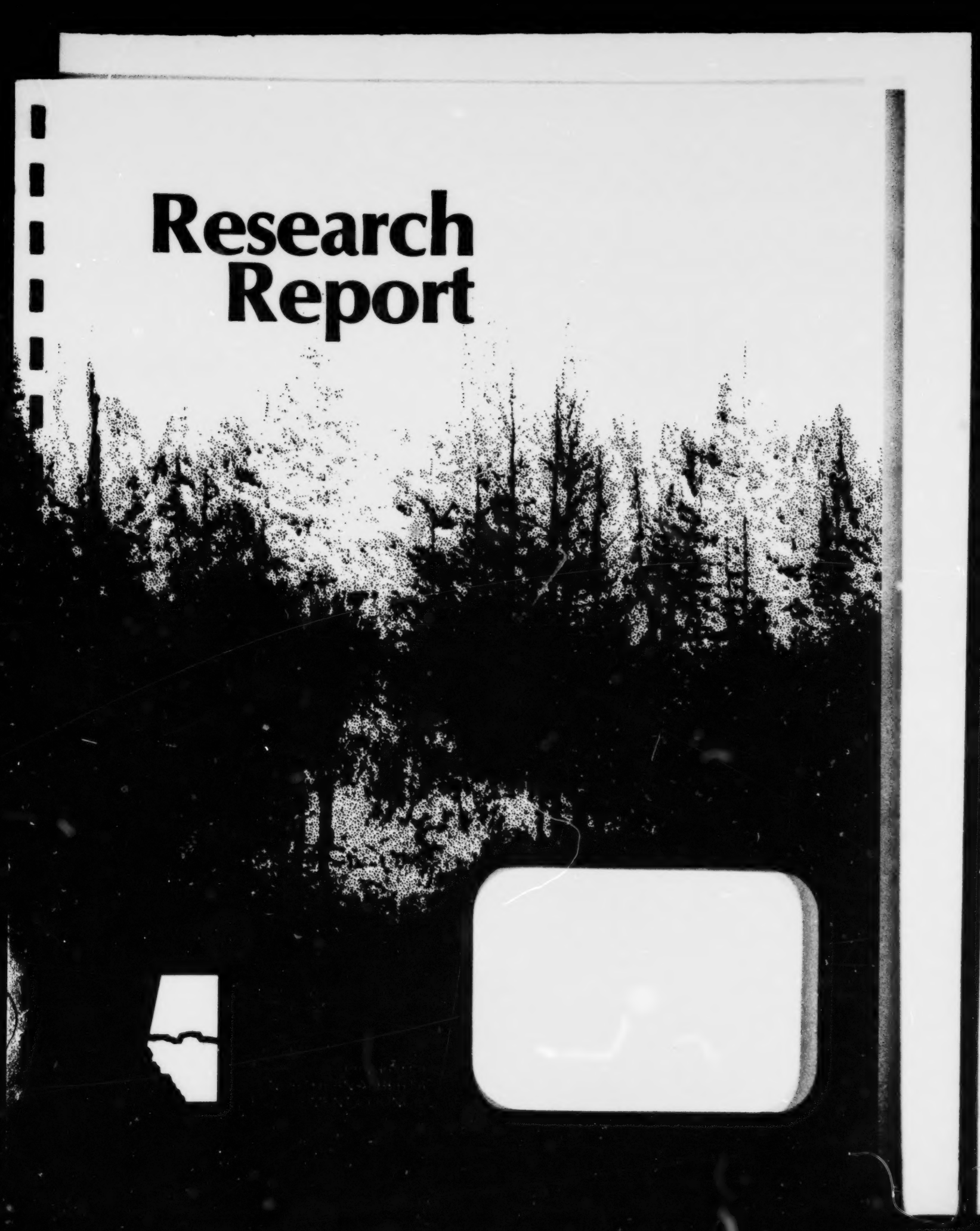
Research Report



SUMMARIES OF RESEARCH REPORTS

VOLUME I

1975 - 1979

NORTHERN DEVELOPMENT BRANCH

PEACE RIVER, MAY, 1984

INTRODUCTION

VOLUME I: 1975 - 1979

Since its re-organization in 1973, the Northern Alberta Development Council has been developing avenues of communication for the people of the region to express their ideas and concerns regarding development of the North. In addition to public meetings and major conferences, the Council attempts to achieve its objective of providing advice to the Provincial Government by carrying out relevant, practically orientated research.

During the years 1975-79, the Council sponsored or co-sponsored some twenty-seven studies examining a wide variety of topics. The following pages contain summaries of all the studies completed during that five-year time period. Attention has been given to including bibliographic details of each report on the individual summary title pages. However, it must be emphasized that the summaries have been written by staff members of the Northern Development Branch. In many cases, this has been done without the benefit of comments from the respective authors. Any errors or misrepresentations of details of these research projects are therefore the responsibility of the Branch.

Putting so many summaries together in one volume certainly has its limitations. It may seem tough reading and disjointed to some readers. Unfortunately, most summaries do not capture the context and the dynamism that are often present in the complete reports. It is difficult to explain why so many diverse topics are covered without elaborating on how the NADC gets involved in sponsoring research.

Briefly, each project has its own unique history. Some originated in briefs submitted by members of the public to the NADC, especially during the Council's public meeting held monthly or bi-monthly in different places throughout northern Alberta. Others evolved from the recommendations of seminars and conferences sponsored by the NADC, or from a combination of these recommendations and specific requests in public briefs. Still others came about following resolutions adopted by the NADC after several months of meetings and discussions on a particular topic. Finally, research projects sponsored by the Council are often a reflection of the councillor's joint goals and priorities for northern development.

Some additional points which may assist the reader are:

- The NADC is inclined toward action-oriented and problem-oriented research. For the Council, research is not an end in itself, but a means by which application of social and natural sciences can assist in the task of promoting improvements in the quality of life for northern Albertans.

- The decision to use external consultants as opposed to in-house research capabilities is related to the purpose of the project and the time constraints of the Council's support staff (the Northern Development Branch).

- The basic aims of the NADC include the encouragement of closer working relationships between departments of the Alberta Government and an ongoing practice of consultation between these departments and northern communities.

- The NADC believes very strongly that it needs good information on hand if it is to have adequate preparation to make timely and relevant recommendations to the Alberta Government.

- Over the years, the Council has been listening to northerners through a variety of media. One of the recurrent messages the councillors hear is that as much information as possible should be made public. This is particularly true when citizens of the north give of their time and energy to answer surveys or meet with interviewers.

The Northern Alberta Development Council is acutely aware of some of the difficulties that have arisen from conducting research in northern Alberta. Information dissemination, action on results, community reaction to "yet another study", possible concerns of government agencies -- these were among the topics addressed in the Research Review Seminar held in June, 1981. A document entitled, "Guidelines for Research in Northern Alberta" has been issued by the Council which attempts to address many of these concerns.

Comments and suggestions on research summaries should be directed to:

Northern Alberta Development Council
Bag 900-14
Peace River, Alberta
T0H 2X0

Summaries of research projects are available in three volumes:

Volume I: 1975-79
Volume II: 1980-82
Volume III: 1983-84

CONTENTS

1. Resource Development and the Problems of People; Applied Research Associates Ltd., Edmonton. March, 1975.

2. An Overview of Debt Financing and Debt Delinquency with Particular Reference to Debt Delinquency in Northern Alberta; Northern Development Group, Edmonton. March, 1975 (revised April, 1979).

3. Research Study for Development of Granite Deposits at Fort Chipewyan, Phase I; Angus Butler Engineering Ltd., Edmonton. March, 1975.

4. Language Policy and Indian Education; Dr. Douglas Parker, Edmonton. April, 1975.

5. Development of Rochers Red Granite Deposits at Fort Chipewyan, Alberta, Phase II; Abel-Gemini Consortium, Edmonton and Vancouver. January, 1976.

6. The Impact of Major Resource Projects with Reference to Regional Development in Northeast Alberta; Peter C. Nichols and Associates Ltd., Edmonton. April, 1976.

7. Family Planning in Alberta Series with Special Reference to Volume 3, Population: Socio-Economic Factors; Wayne McVey, et.al., Edmonton. August, 1976.

8. Northern Transportation Study: An Overview of Alberta's Role in Northern Transportation; The Grimble Consulting Group, Edmonton. September, 1976.

9. Engineering Report on Feasibility Study of a Proposed Trout Rearing and Processing Operation at Grande Cache, Alberta; W.L. Wardrop and Associates Ltd., Edmonton. October, 1976.

10. Agriculture in Northern Alberta: An Introductory Study; Carcajou Research Ltd., Edmonton. August, 1977.

11. Victor Lake Cooperative Ltd. (of the Grande Cache area) Handbook; Applied Research Associates Ltd., Ponoka. September, 1977.

12. Economic Development of Northern Alberta; Northern Alberta Development Council, Edmonton. December, 1977.

13. Community Economic and Employment Survey; Peter C. Nichols and Associates Ltd., Edmonton. June, 1978.

14. Native Migration Patterns in and About Selected Northern Alberta Communities; MTB Consultants Ltd., Edmonton. June, 1978.

15. Economic Feasibility Analysis of Developing a Game Ranch on the Kikino-Caslan Metis Settlement; Richmond Livestock and Management Consulting Co. Ltd., Hinton. September, 1978.

16. Smith: Assessment of Infrastructure, Resource Base and Economic Development Potential; Hollinshead, LeFrancois and Associates, Edmonton. December, 1978.

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21. A Study of Municipal Infrastructure with Reference to Northern Alberta; Peter C. Nichols and Associates Ltd., Edmonton. June, 1979.

22. An Evaluation of the Northern Alberta Development Council Student Bursary Program; Carcajou Research Ltd., Edmonton. June, 1979.

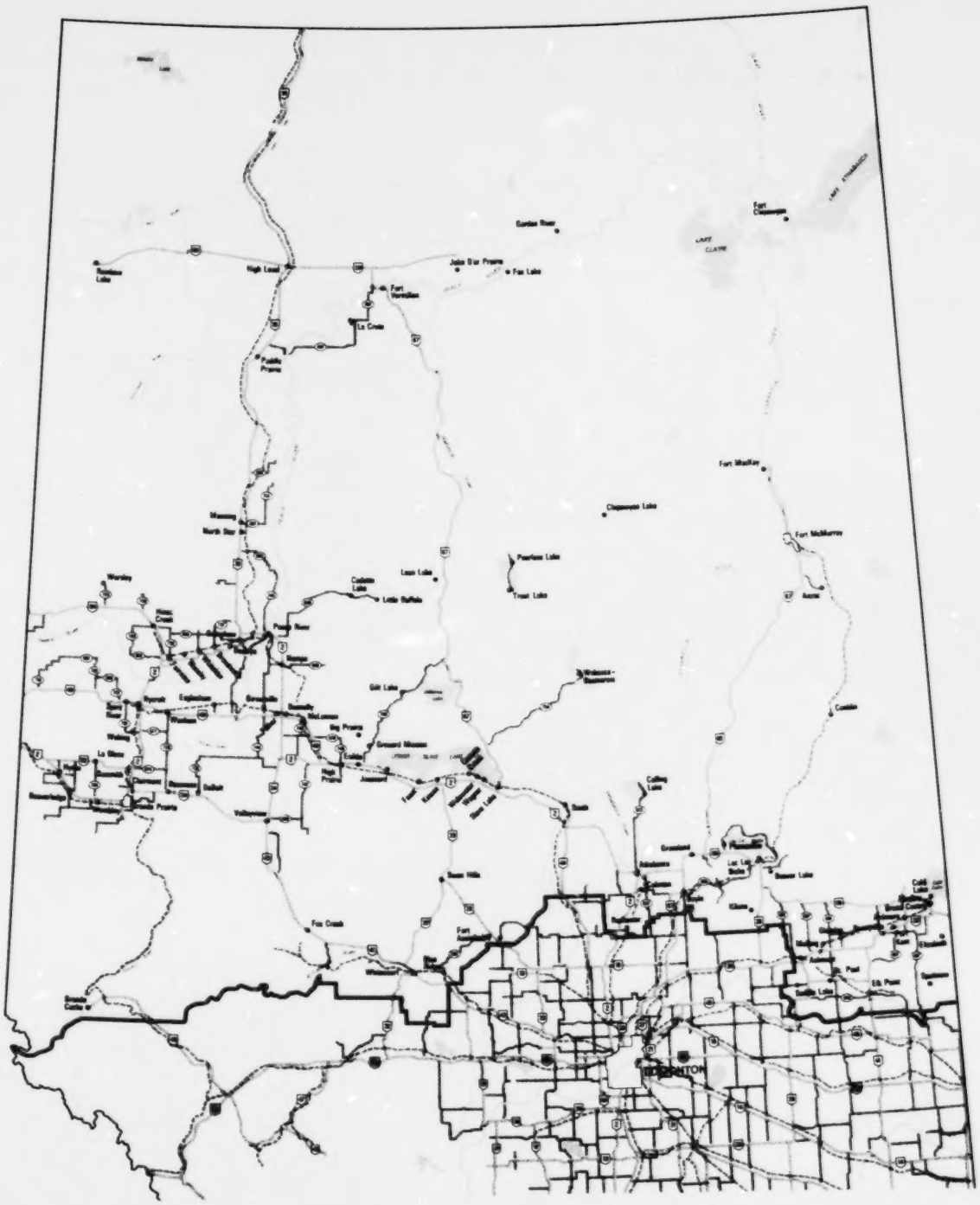
23. Dunvegan Hydro-Electricity Development Project: Summary and Overview; Northern Development Branch, Peace River. July, 1979.

24. Survey of Metis Settlements; Peter C. Nichols and Associates Ltd., Edmonton. September, 1979.

25. Fishing in Northern Alberta; Northern Alberta Development Council, Peace River. October, 1979.

26. Day Care in Northern Alberta; Northern Development Branch and Muskwa-Sit Consulting Ltd., Peace River. November, 1979.

27. Report on the Economic and Technical Feasibility of Extending the Services of Sunwapta Broadcasting Limited to Remote Communities in Northern Alberta; Management Advisory Insitute, Edmonton. November, 1979.



NORTHERN ALBERTA DEVELOPMENT COUNCIL AREA

COMMUNITIES WITH POPULATION OVER 75 (1991 CANADA CENSUS)

PRIMARY HIGHWAY

SECONDARY ROAD

RAILWAY

PRODUCED BY THE ALBERTA BUREAU OF SURVEYING AND MAPPING © 1993

The following is a summary prepared by the
Northern Development Branch
of

Resource Development and the Problems of People

Authored by Edward W. Van Dyke, Ph.D.
Applied Research Associates, Ltd.
Edmonton, Alberta
March, 1975.

Sponsored by the Northern Development Group

PURPOSE AND BACKGROUND OF STUDY

Initially designated the "Northern Problem Study, Phase I", this piece of research was an attempt to investigate the kinds of social and personal problems that arise as a result of resource development. The consultant was asked to do this in two ways:

- by surveying the relevant literature, and
- by interviewing "professional" people in northern Alberta whose jobs bring them into regular contact with northern households and with their social and personal problems.

The final report, Resource Development and the Problems of People, consists of two parts; the first being an account of the interviews, and the second a comprehensive review of selected literature.

SPECIFIC OBJECTIVES AND METHODOLOGY

'Resource development' was interpreted by the authors to include any form of major economic development excepting agricultural development. A social or personal 'problem' was taken to mean a 'social situation' which is a source of perplexity or vexation.

Semi-structured personal interviews were conducted with 180 respondents in agricultural, resource and native communities across northern Alberta. The first and third types were included to provide a basis for comparison with resource communities. A limitation of the study is that, since interviews were limited to professional people (not all of whom were resident in the communities about which they were asked), the resulting data reflects the perspectives of professionals.

It is desirable, in the long term, to draw conclusions about what kinds of problems are caused by resource development. However, 'expert opinion' is a poor source of data on which to base final conclusions. It is appropriate, nonetheless, to use such information for the construction of hypotheses on the nature of social and personal problems associated with, or caused by, resource development.

PRINCIPAL FINDINGS

In separate chapters on agricultural, resource, and native communities, points raised by respondents are summarized under the following headings:

Life Style	Amenities
Inter-cultural Problems	Government
Personal Problems	Crime, Suicide and Drug Abuse
Economics	Solutions

The analytical chapter (Ch.5) sets out ten characteristics of resource development and the problems perceived by informants in association with each characteristic. These are:

(1) Resource development is characterized by relatively large scale and intense economic activity.

- Exploitation - Not only are companies and governments exploiting resources in a literal sense, but individuals are lured into resource communities by the desire to exploit personal economic opportunity. Informants indicated that professional people are motivated to serve throughout the north, not because they love the region for its own sake, but because the opportunity to make "big money" is available.

- The general affluence typical of resource development areas is associated with personal debt. In the face of high wages, credit is extremely easy to obtain. Because many individuals have never experienced such affluence previously, credit is easily abused. Knowledge of budgeting and of home economy is frequently lacking.

(2) Resource development is characterized by more or less planned economic activities carried out by large corporations or governments.

- Many informants in resource communities associate government and company planning with a lack of social expertise.

- Companies are perceived as not accepting their social responsibilities in planning for resource communities.

- Companies appear to be structuring their activities in such a manner as to place many pressures upon their personnel.

- Development of many resource communities on the basis of a single industry is a problem associated with government and company planning.

- Many informants feel that the physical planning of resource communities is another problem associated with government and companies.

(3) Resource development is typified by areas of activity (recent in origin) which are away from population centres. Thus, the areas are isolated from other communities.

- Depression is associated with life in the north in general, although it seems to be particularly acute among persons who have moved to resource communities from urban areas.

- Loneliness seems to be a common problem to all types of northern communities.

- Especially in resource communities, fear of the wilderness is another problem related to isolation.

(4) Resource development is typified by massive or large-scale movement of goods and people. A resource community usually springs up very quickly as goods and people are moved en masse into the development area. A sizeable segment of the incoming population moves from urban areas to the resource community. Individuals from urban areas have more difficulty adapting to life in a resource community than do those who come from other types of communities. Informants identified the problems as:

- Different national or ethnic groups are frequently thrown together overnight in a resource town.

- The resource boom town appears to be a collection point for people who have been unsuccessful in other communities.

- Transience - With regard to the general labour force, this is intensified in major resource development areas. However, the problem of transience among professional people seems to be found throughout the North.

- A massive movement of people is associated with community apathy and general lack of community participation.

(5) Resource development is characterized by the establishment of communities which frequently lack physical amenities and/or a stable social structure.

- Over the past 10 to 15 years, considerable changes are evident in relation to the types of amenities provided for new resource towns. However, some of the resource areas established before this period still appear to lack many basic physical amenities and community services.

- Because the creation of a new resource town takes place so rapidly, the first few years of even the most recently created towns appear to be typified by overcrowding. Informants in resource communities list overcrowding in schools, stores and other facilities as a serious social problem.

- Lack of adequate housing is not seen as unique to resource development. However, the intensity of the housing problem is experienced more directly by residents of resource communities.

(6) Resource development is characterized by a high percentage of broken homes. Family breakdown is found in many types of communities other than resource towns. However, the incidence of the problem is so high in resource communities that one might perceive this type of 'social situation' as a characteristic of resource development. Family breakdown appears to be associated with:

- lack of communication between family members;
- sexual promiscuity (accentuated in resource communities);
- the fact that people living in resource towns are removed from their kin groups;
- the fact that in resource communities, men are away from home for long periods of time for work;
- the needs of men being well cared for, while women are frequently left with nothing to do; and
- welfare providing independence for women.

(7) Resource development is typified by local government which does not have the freedom to facilitate local self-determination and development of the community.

- the largest number of problems identified by informants in resource communities revolve around the activities of government and the concomitant emasculation of local government.

- The actions of central government in relation to resource communities force these towns to be abnormally dependent upon central government. With the transiency of many persons in these communities, a measure of control is relinquished by the local community and passed, by default, to the central government.

- Incompetent personnel are associated with the actions of central government in the North.

- Government bureaucracy is associated with local community problems.

- Lack of coordination between government departments in resource communities is a problem.

- Centralization of government decision-making is associated with the emasculation of local autonomy.

- "Political interference" in local affairs is listed as a problem.

- Central government is accused of not coping with problems which actually exist in resource communities, because government agencies are unknowledgeable concerning local conditions.

- Resource communities complain of being over-governed.

(8) Resource development is characterized by intensification of personal and social problems.

- Informants associate the media with the intensification of social and personal problems in resource communities.

- Attitudes linked to what some informants refer to as "the Great American Dream" aid in the intensification of social and personal problems in resource communities.

- The "false solutions" of do-gooders intensify social and personal problems.

- Informants unanimously agree that alcohol abuse is extreme in resource communities. But some persons see alcohol as a cause of problems, while others perceive it as a response to problems.

(9) Resource development is characterized by displacement or assimilation of native communities and disruption of traditional patterns of life.

- Natives are absorbed into the labour force in many instances, but are kept at the level of unskilled and semi-skilled jobs. Many informants point to the ineffective training of native people as being related to this issue.

- Displacement of native people by resource development activity not only destroys the traditional economic base of native communities, but tends to isolate native people from economic participation in resource activity -- unless they are willing to be assimilated into the larger, intruding society.

(10) According to the perceptions of informants, assaults, suicide and drug abuse appear to be more frequent in resource communities than in other

types of communities. Assault seems to be associated with the overall live-hard-play-hard philosophy of life in a resource town. Suicide is related to factors impinging on the quality of life in resource areas, with the exception that suicide may be linked to women more frequently than in other types of community. Drug abuse can be partially understood in the context of transience; it appears to be tied closely to the movements of unskilled and semi-skilled labourers.

STRATEGIC RECOMMENDATIONS

The authors put forward 15 hypotheses concerning the relationship between social and personal problems, and resource and economic development. It was then recommended that future research should focus on these hypotheses and be based on the perspectives of "grass roots" individuals as obtained through the method of participant observation in a minimum of four communities. Selection of communities should include:-

- a traditional agricultural community;
- a marginal agricultural community in interaction with native people;
- a relatively young resource community in association with native people; and
- an established resource community.

The following is a summary prepared by the
Northern Development Branch
of

An Overview of Debt Financing and Debt Delinquency with Particular Reference to Debt Delinquency in Northern Alberta

Authored by the Northern Development Group
Edmonton, Alberta
March, 1975
(Revised April, 1979)

Sponsored by the Northern Alberta Development Council

The aggregate amount of debt is limited to aggregate economic activity, the rate of inflation, interest rates, and a host of social factors such as the stigma attached to being a defaulting debtor or a usurious lender. Both the U.S. and Canada have experienced substantial increases in personal debt financing. Figures suggest that between 1956 and 1977, personal debt in Canada doubled in relation to people's ability to repay the debts.

Debt financing is available to nearly every adult Canadian. Like most things, it has been abused and it has caused many problems for those who are not well educated and disciplined in its use. However, sight should not be lost of the fact that the benefits of debt financing outweigh by far the associated costs. For every Canadian with serious debt problems, there are undoubtedly ten others who are successfully using borrowed money to house and educate their young families, and ten more about to retire happily on the strength of savings which they have been lending.

Debt delinquency is not simply a legal problem or an economic problem; it is a social problem. A list of some of the benefits, costs, and remedies for problems associated with using debt looks like this:

Benefits:- match family income stream with spending stream
- capitalization of major projects by governments and companies

Costs:
- administrative costs of matching lender and borrower
- tension (headache, insomnia, upset stomach, loss of appetite)
- family breakdown
- perhaps stealing and some social deviance
- association with underworld crime (gambling debts)
- loss of employment (legal means now exist to stop this)
- court costs
- welfare costs
- losses to creditors (debts which are never repaid)

Remedies:
- orderly payment of debts
- bankruptcy
- consolidation of debts
- counselling
- education (bookkeeping, etc.)
- restricting availability of credit
- problems often self-correcting

Only very few people deliberately over-extend themselves with the intention of not paying up. Human failings other than unethical behaviour are by far the most common causes of insolvency. In some instances, such as in households where

Background

This paper on consumer debt financing and delinquency was written by a staff mamber of the Northern Development Group, and was based on research conducted during late 1974 and early 1975. It was used by the Northern Alberta Development Council as the basis for making recommendations to the Alberta Government.

Objectives

There appear to be two parts to the report: an academic discussion of the phenomena of debt financing and debt delinquency; and an analysis of debt Statistics for Northern Alberta. The first part specifically addresses the following topics:

- the nature and causes of debt financing
- good and bad aspects of debt financing
- causes of excessive indebtedness and default
- demographic characteristics of defaulters
- society's treatment of defaulters
- contemplated reforms in the treatment of defaulters

Findings

Debt financing is an integral part of the financial structure of modern household and business economics. In general terms, it occurs because of people who having earned money are loath to spend it right away, and people who, not having earned money, would dearly like to spend some as soon as possible. At one extreme, hoarding currency in a sock is a mild form of debt financing. The saver has performed a service and the money he has received represents a claim on the services of the rest of the community. Of course, there are no interest or repayment terms specified for this kind of loan, and society is not legally bound to return any services to the lender (although, in practise his notes will be acceptable most anywhere). At the other extreme are commercial loans for which market interest rates are specified and stiff penalties exacted if the schedule of repayment is not faithfully followed. Between these two extremes are loans of every shade of formality, interest rate and repayment schedule.

the breadwinner is laid off at work, the insolvency may not be the fault of the debtor -- even though the debtor usually bears the responsibility.

The Family Financial Counselling Unit (now part of the Alberta Department of Consumer and Corporate Affairs, but with an operating history of approximately 50 years) helps individuals with debt problems. The Unit's services are primarily curative as opposed to preventive, although prospects exist of offering some debt-preventive services in collaboration with Alberta Agriculture's District Home Economists.

The Orderly Payment of Debts Programme has made Alberta a leader among reformers in the field of debt delinquency legislation. Prescribed in the federal Bankruptcy Act, this programme provides a means whereby debtors can consolidate their debts and pay back their debts in a manner consistent with their monthly income.

The Poor Debtors' Programme of the Federal Department of Consumer and Corporate Affairs is designed to enable poor people to afford to undertake bankruptcy proceedings. However, of all the courses of action available to the delinquent debtor, bankruptcy should be considered a last resort.

The author conducted a review of court files for bankrupts and people using the Orderly Payment of Debts Programme in northern Alberta. Conclusions drawn were:

- In northern Alberta, as elsewhere, the level of debt has been rising faster than incomes.
- Delinquent debtors in northern Alberta are generally young married adults.
- The average income of delinquent debtors in Northern Alberta falls short of the average incomes of others in their own age group. It is significant that the average income of adults in the general population increases with increasing age; this is not so for the incomes of the debtors surveyed.
- The average liabilities and the average net deficit (liabilities less assets) of bankrupts in northern rural areas appear to be significantly greater than the respective figures for bankrupts in urban areas (i.e. Edmonton, Peace River, Fort McMurray, and Grande Prairie).
- Business mismanagement is a particularly prevalent cause of bankruptcy, especially in northern rural areas.

- There is evidence that newer resource towns such as Grande Cache and Fort McMurray have pronounced problems regarding debt delinquency.

RECOMMENDATIONS

1. That more emphasis be given to debt-related topics in the curricula prescribed by the Alberta Department of Education.
2. That courses be established to enhance the management skills of persons running small owner-operated businesses.
3. That research be conducted into the relationships existing in small northern communities between habitual debtors and local merchants.
4. While no evidence came to light in the course of this study indicating that special debt-related programmes be instituted in northern Alberta, some thought should be given to intensifying the application of province-wide programmes in new resource towns.

The following is a summary prepared by the
Northern Development Branch
of

Research Study for Development of Granite Deposits
at Fort Chipewyan, Phase 1

Authored by Angus, Butler Engineering Ltd.
Edmonton, Alberta
March, 1975

Sponsored by the Northern Development Group

BACKGROUND

The community of Fort Chipewyan has played a very important part in the development of Northeastern Alberta. Through the first half of the twentieth century, the people continued to find their livelihoods in the resources of the land, namely trapping, fishing and hunting. Gradually, other opportunities became available with employment in barging, lumbering, commercial fishing and government. These activities, together with compulsory schooling, housing, social assistance and medical facilities led to a gradual urbanization in Fort Chipewyan. Lately, trapping, fishing and subsistence hunting has declined in economic importance and there have also been a loss of employment opportunites in barging and lumbering. One of the most interesting opportunities for a future economic base for the community is found in the Pre-Cambrian Shield area lying north to the Alberta border with the Northwest Territories. Geological mapping of this area has revealed no major mineral deposits of economic interest but has determined that there is a large granite deposit of suitable colour and texture within a few miles of Fort Chipewyan. This deposit was discovered by Dr. John D. Godfrey of the Alberta Research Council during a geological mapping program in the summer of 1970.

SPECIFIC OBJECTIVE

This report contains the substance and results of a preliminary feasibility investigation for development of the granite deposit in the Fort Chipewyan area.

PRINCIPAL FINDINGS

Technical Qualities

Limited tests were carried out on the Rochers Red Granite with

favourable results. There is little doubt at this point that this stone is suitable for building uses. It remains to be seen, however, whether the deposit has sufficient high quality material to service the marketplace. The stone's acceptability for uses such as monument stone and curling stone has not as yet been determined. The study has determined the tests required to: 1) establish the quality of the stone, and 2) the extent and character of the deposit. The standards of quality required for major markets have been defined. Results from this phase of the study have been limited by insufficient samples for physical testing and market assessment.

Markets

Due to the lack of specimen material, preliminary market assessment was inconclusive. As indicated above, considerable interest in the stone has been shown by marketing organizations and individuals in the monument and stone industry. The Canadian monument stone market appears to be growing. The building stone market is stable with little or no growth factor. There is considerable potential in the curling stone market. Other products such as crushed aggregate could have a market provided support by government created a base for such a market.

It is evident that a high quality granite product can be sold on Canadian and World markets despite the high cost of transportation out of Fort Chipewyan. Potential customers require polished samples of material, knowledge of physical properties, and assurance of a consistent supply.

Transportation

Transportation is obviously a high cost factor in any operation centered in Fort Chipewyan. The seasonal nature of river transportation

creates further complications. However, for a high quality product saleable on world markets, transportation can be an acceptable part of cost, even in such a remote location as Fort Chipewyan.

Operation

Angus, Butler Engineering Ltd. has done some preliminary thinking on the operation of a quarry and plant in the Fort Chipewyan area. Any approach must take into consideration, not only the seasonal nature of the quarry operation, but the traditional seasonality of the community's labour force. For instance, a plant and quarry could work in very well with the trapping pursuits of the people.

Inventory can be a problem if not properly considered, and arrangements must be made for higher than normal inventory levels. The quarry, when operated, should be done so on a capacity basis in order to make best use of the shorter operational season. The shipment of raw material to plant must be done efficiently.

Since one of the prime objectives is to create labour, it is important that choice of equipment, etc., should be made on this basis. Where possible complex automated equipment should be avoided. Construction methods and operational practices should be chosen so as to emphasize local involvement.

Socio-Economic

The community of Fort Chipewyan has a large unemployed labour force which, from preliminary observation, would be well suited to employment in a granite quarry and plant operation. Since between 15 and 20 persons would be employed, the enterprise could prove very beneficial. Like other communities with little or no economic base, the community has many social problems which must be given consideration in any plans for development of a major enterprise.

STRATEGIC RECOMMENDATIONS

While the findings are somewhat inconclusive, there is sufficient evidence to indicate that further investigation should be made of the granite deposits at Fort Chipewyan. Since the main problem centres on a lack of bulk samples, it is recommended that this be the focus of the next phase. Samples should be secured for physical tests and for creation of marketing samples. There is also a need to determine the extent of the deposit so that markets can be assured of an adequate supply of stone. Further research will provide an excellent opportunity for the study group to work with the community of Fort Chipewyan.

The following is a summary prepared by the
Northern Development Branch
of

Language Policy and Indian Education

Authored by Dr. Douglas V. Parker
Faculty of Education
University of Alberta
Edmonton, Alberta
April, 1975

Sponsored by the Northern Development Group

PURPOSE OF THE STUDY / METHODOLOGY

The purpose of this study is to determine, by reviewing and reporting on literature in the field of vernacular and second language teaching, whether it is better to begin the elementary school program in the child's own language or to embark immediately on an ESL (English as a second language) program.

BACKGROUND

In North America it is widely accepted that language is the central vehicle of the educational process and thus any decisions regarding the language of instruction will have long-term effects on the child's life both during and after his school years. Unfortunately, language is only one of a great variety of interlocking factors, including community, socio-economic status, and parental and community attitudes towards education, which greatly compound the problems of educating people who are culturally and linguistically different.
These factors may ultimately all have to be dealt with to some extent, in order to make sound decisions about language program planning for the Native child in the schools of northern Alberta in late 1970's and early 1980's.

SPECIFIC OBJECTIVES

No specific objectives, apart from the main purpose, are outlined in this study.

PRINCIPAL FINDINGS

The author of this study concludes that there may be greater long-term advantages in beginning the school program in the child's

language rather than immediately beginning an ESL program with no instruction in the ancestral language. However, a caveat to be noted is that results from a given community may be applied only with great caution to the situation in another. This conclusion is based upon research which stresses the following:

1. Marked improvement in the child's self-concept

   Language is the most important exteriorization of the self as through it the child expresses his thought and, through its use by the people in his extended family, he derives support as a person.
   The Native (Indian) child is probably justly proud of his language and could conclude that it is inferior if the school teaches that English is the only acceptable language there, either during classes or free play. Rejecting the mother tongue could be expected to seriously and adversely affect the child's concept of his parents, his home and of himself. The inevitable problems of alienation and low self-esteem would be greatly improved if instruction in the ancestral language could be given for the first several years of school at least.

2. Improvement in the school's relationship with the community

   Indian education in Canada has been marked by much mistrust of the school on the part of the community, an attitude which has undoubtedly contributed to the dropout rate. If beginning to read in the child's own language will help to improve this situation, the slight retardation mentioned in several studies will be a small price to pay if it results in the child staying longer in school and benefiting from his experience there.

3. Improved reading skills and easier transfer to English

In the Indian culture, the child's intelligence is demonstrated through his ability to solve problems of a concrete nature, relating to his immediate physical survival in a harsh environment rather than trying to comprehend the abstract values of it. In essence, he is concerned with the 'how?' rather than the 'why?'. The result is that the Indian child has difficulty in thinking in an abstract fashion and interpreting language symbols, which inevitably impedes his progress in reading materials written only in English. Thus, once the child has better learned how to think (in his native language) and thereby how to learn, he is better equipped to learn anything that he may need to learn, including the second language, English.

This opinion, however, is subject to the following restrictions or considerations:

- Linguistic reality of the community

In making decisions about language policy the vitality or 'health' of the language must be taken into account and can be expressed in the following stages:

1) flourishing - the language must still be in daily use on an almost exclusive basis in the community and thus English could only be considered as a second language, if used at all.
2) obsolescing - the language is still used for social interaction in the community but only in restricted situations and not all of the children still learn it; in fact they are learning both languages at the same time.

3) obsolete - technically the language is still living (it is rememebered by some of the adults in the community but rarely used) but sociologically it is dead and thus English is spoken by virtually everyone.

4) dead - there are no more living speakers of the language, even though tapes and written descriptions may still be avialable.

Once the linguistic situation in a given community has been assessed, a program can be set up to determine whether a Maintenance or Transfer Model most closely fits the wishes of the people and the reality of the situation.

- Child's language dominance

  Regardless of the community decision, every child, on his arrival in Grade One should be tested to determine his linguistic dominance. For the child who is totally fluent in English there is obviously no problem. For the child who arrives speaking 'Indian English', a combination of language arts and ESL approaches seems to be indicated. However, on no account should the child be made to feel that his language is inferior.

In conclusion, for the Native child school is too often thought of as either the 'White Man's School' or one where little attention is paid to the need to take children at the point where they are and to progress from there. It is this problem of lack of relevance to his own culture, as perceived by the student, which may be the single most powerful factor in creating very real self-doubt about his future in a White-controlled society.

STRATEGIC RECOMMENDATIONS

This study offers the following recommendations:

1) For the child who comes speaking only his ancestral language, it is strongly recommended that he be taught in this language, but while this is taking place, he

should immediately begin work on an intensive ESL program.

2) Numerous times, the literature has stressed the importance of an effective program in English as a second language for children who are non-English speaking. Therefore, it is most strongly recommended that all teachers hired in the future be required to show evidence of training in ESL, preferably in an Indian Education context.

3) It is recommended that long-range, carefully controlled, evaluation programs be set up to assess the effect of different strategies when applied to the various communities in the northern part of Alberta.

The following is a summary prepared by the
Northern Development Branch
of

Development of Rochers Red Granite Deposits at Fort Chipewyan, Alberta, Phase II

Authored by ABEL-GEMINI, a consortium of
Angus, Butler Engineering Ltd.
Edmonton, Alberta; and
Gemini North Ltd.
Vancouver, B.C.
January, 1976

Sponsored by the Northern Development Branch and the
Alberta Research Council

BACKGROUND/PURPOSE

Subsequent to completion of Phase I, Angus, Butler Engineering Ltd. and Gemini North Ltd. (jointly known as Abel-Gemini) were commissioned to make preliminary investigations into marketing, technical feasibility, and socio-economic aspects of the proposed development of granite deposits north of Fort Chipewyan.

The purpose of the study was to provide further, hopefully final, proof of the quality of the granite and its suitability for quarrying and marketing, and to determine whether granite production was a suitable economic activity for the community of Fort Chipewyan.

SPECIFIC OBJECTIVES AND METHODOLOGY

1. To determine the physical properties of Rochers Red Granite by a drilling, sampling and testing program. The granite, a rosy red colour, was named "Rochers Red" since the deposit was located near the Rivière des Rochers. "Site 16", at which the granite was tested, is located about 7 miles north-northwest of Fort Chipewyan and about 3,000 feet east of an oxbow on the Rivière des Rochers. Work performed included 6 one-inch diameter diamond drill holes, each about 25 feet in depth, 4 hand trenches from which 2.5 tons of samples were selected and removed, and construction of topographic and geologic maps of the deposit at scales of 1 inch = 10 feet.

Additional quarry sites were identified for further exploration within a mile of Site 16.

2. To evaluate the suitability of a granite and quarrying operation, given the local human resource base. Residents of Fort Chipewyan were involved in the research and decision-making process related to this objective. The community participation program comprised the following elements:

(i) An initial public meeting was held in the community by Abel-Gemini to inform residents of the study and to seek local input.

(ii) Local residents were involved in the drilling program itself, and community leaders were encouraged to visit the drilling site.

(iii) A six-member community research team was formed for the purpose of visiting quarrying and processing operations in Quebec, in order to analyse the nature of the operations and the job skills and training required.

(iv) A second public meeting was held in order to enable the community researchers to present their findings to other local residents.

(v) A presentation was made by Abel-Gemini to the Northern Alberta Development Council.

3. To develop a preliminary financial scenario for developing the proposed quarry and processing plant. This was seen as a challenge to design a project which would be consistent with the nature of the deposits, the development of a human resource base, and the requirements of the market place. The consultants concentrated on suggesting an appropriate technology to quarry and process granite in a manner which would accommodate these constraints.

PRINCIPAL FINDINGS

Abel-Gemini concluded that the proposed granite quarrying and processing operations appear feasible and that further work should proceed, subject to certain constraints.

First, drilling and testing to date indicates that the granite is technically sound and thus potentially marketable, although not all testing has been completed. However, the reserves

at the site selected for study, Site 16, are not extensive and the site may prove costly to develop as a granite producing quarry.

Second, the proposed granite quarrying and processing operations appear to offer employment opportunites which are consistent with the present and potential skills of the Fort Chip labour force. However, the available labour force is small, and local participation in the project can not be assumed.

Third, the development of granite industry as an employment base appears to be acceptable to local residents. However, it should be noted that the community is mainly native, and a project which attracted an influx of white "outsiders" could adversely affect the ethnic structure of Fort Chipewyan.

In seeking to evolve a technology that is appropriate to the nature of the deposits, the development of the human resource base, and the requirements of the market place, the consultants urge that the following considerations be made:

(i) Further geological exploration and development should proceed in order to extend the reserves and range of granites available for processing. This is consistent with the industry's experience in Quebec, where several quarry sites may be investigated before a production site is selected. This is particularly important in quarrying, where a selected site might prove disappointing once the overburden and waste rock have been removed.

(ii) The timing of the quarrying and processing operations should be co-ordinated with the acquisition of vocational skills by Fort Chip residents to enable them to take advantage of the employment opportunities created.

(iii) Where possible the scale of the proposed operation and the projected level of output should be consistent with the present and projected growth of the community's working age population.

STRATEGIC RECOMMENDATIONS

Abel-Gemini suggest that in Phase Three of the study, the emphasis should be given to financial feasibility, marketing, and environmental aspects of the development. Specifically, they make the following recommendations.

1. The three-year pilot quarry and processing plant operation described in the Phase II report should be initiated.

2. Detailed financial and economic studies should be carried out to determine the likely costs of producing a marketable granite product at Fort Chip. These studies should include a refinement of the cost estimates presented in this report in order to account for higher costs of similar granite operations in Quebec. These studies should also include a benefit-cost or similar evaluative analysis to determine the effectiveness of the proposed granite project in light of alternative investments and other opportunity costs.

3. Further geological exploration and development should be carried out at or near Site 16, in order to select a suitable quarry site and to extend the reserves and range of granites.

4. A marketing strategy should be evolved for both domestic and international markets, and a market commitment secured for Rochers Red granite. This commitment could take the form of a guarantee by the Alberta government to purchase a specified amount of granite product at a price to be determined by the financial feasibility studies.

5. Environmental studies should be initiated to assess the effect of the proposed development on the local land, water, and wildlife resources.

The following is a summary prepared by the
Northern Development Branch
of

The Impact of Major Resource Projects with Reference to Regional Development in Northeast Alberta

Authored by Peter C. Nichols & Associates Ltd.
Edmonton, Alberta
April, 1976

Sponsored by the Northern Development Branch

PURPOSE

The purpose of this study is to review anticipated major resource projects and their likelihood of implementation; to examine in general terms their men, material and equipment demands; and to discuss the linkages and interrelationsips between these various projects. Trade-offs and policy issues inherent in alternative project development scenarios, and areas of possible resource constraints that might affect the pace of development, are also considered.

BACKGROUND

In recent years, various developments in the field of energy supplies and demand have served to accentuate the importance of the energy industry in Alberta, such that it now accounts for roughly one-half of the total net value of industrial commodity production in the Province. These same chains of events have, additionally, prompted proposals for massive industrial and resource development projects tied to the Province's energy supplies. It has also become evident that the Province's capability to absorb or to accomodate these various projects may indeed be limited and that aside from various factors such as the economic feasibility and environmental impact that will weigh in any decision to proceed with the implementation of individual projects, resource restraints may act to pace the rate of development. Tied in with this issue is the Government's wish to encourage that type and rate of development that maximizes benefits to the Province.

METHODOLOGY

The following are terms of reference for the study:

(a) review and discuss government policies and objectives

regarding provincial growth and development;
(b) review alternative development scenarios for Northeast Alberta and the resource implications of those scenarios;
(c) identify major resource projects - and their respective resource demands - proposed or planned in the Canadian Northwest that may impact on Northeast Alberta's regional development;
(d) assess the inter-relationships between individual projects and the trade-offs inherent in alternative implementation schemes and timing schedules. Analyze the combined impact of the total development program on such things as manpower requirements, materials and equipment requirements, and government services and facilities;
(e) assess the implications of the overall development program relative to the anticipated Northeast Alberta regional growth scenarios. Identify apparent secondary and tertiary industrial development opportunities in the Northeast region.

PRINCIPAL FINDINGS

1. The most probable range of oil sands development in Northeast Alberta over the next decade will entail a maximum of three additional mining projects after Syncrude. In-situ projects are unlikely to become commercially viable until the late 1980's or beyond. Future projects will likely be implemented on a consecutive basis, which will cause major fluctuations in the regional demand for resource inputs, or at two to three year intervals, which will provide the greatest continuity of demand for materials, labour, and equipment. Simultaneous development of two or more projects, such that peak resource requirements overlap, is not now considered reasonable.

2. By almost any standard, the construction of a commercial oil sands project comprises a major undertaking. The cost of one of these complexes is approximately 10 times that of the next largest type of individual project proposed in the Province. The provincial impact is further reinforced by the high labour intensiveness of these oil sands projects compared to other major engineering works. The relative magnitude of these projects in terms of the Province's economic capability is particularly evident during the construction phase, when the local construction, engineering and project management, and machinery and equipment industries must be augmented heavily from outside sources.

3. It is unlikely that the impact of future oil sands projects will be as severe in the future as in the past, for the following reasons:

(a) as the provincial economy grows and matures, its capacity to absorb such projects should improve.

(b) economies may be realized in the construction of future plants, thereby reducing input resource demands.

(c) infrastructure, industrial, and socio-economic development that has been prompted by previous projects may also improve the capability to accommodate future plants.

However, the sheer magnitude of these projects relative to the Provincial population base and manufacturing capability suggests that additional oil sands plants in the future will continue to exert a heavy impact on the Province.

4. The study has identified future industrial and resource development projects in western Canada which, superimposed on normal levels of economic activity, might be expected to generate resource demand requirements such as to adversely affect the concomitant development of oil sands projects.

These major projects are heavily oriented toward the production,

processing, or transportation of non-renewable resources.

5. The major resource input provided by Alberta in the development of large resource and industrial projects is in respect to construction and operating manpower.

6. The combined value of the ten major projects proposed for the 1976 - 1979 period would total roughly $1.2 billion, or one-half the cost of a single oil sands plant. The average and peak manpower requirements to construct those plants will be equal to 50 - 60% of the Syncrude labour force. The labour force composition is quite similar for all projects, with a particular concentration on the skilled mechanical trades. Without the commencement of an additional oil sands plant prior to 1980, labour supply problems posed by the development of the projects should not be significant. However, it is possible that some overlapping of labour demand with the Syncrude project could be experienced in mid-1977 and aggravate the supply-demand situation for certain trades on a short-term basis.

7. Of the major projects likely to be implemented during the 1979 - 1982 period, only the Mackenzie Valley gas pipeline will generate significant construction manpower requirements - of the same order of magnitude as an oil sands plant. However, the future impact of the pipeline construction will be mitigated by the fact that labour requirements will peak during winter months, and occupational requirements overlap those of petrochemical and oil sands projects in only certain areas. Other major projects constructed during the period will not be significant to North-eastern Alberta in terms of competitive labour demand.

8. Beyond 1982, the only anticipated projects with construction and operating labour requirements of a similar nature and magnitude to oil sands mining projects are commercial coal gasification developments, expected to become economically feasible in the mid - 1980's. Individual plants would generate manpower demands equal to about one-half those of a conventional oil sands project and could be a significant competitive influence in the provincial

labour market. For the most part, the proposed petrochemical, fertilizer, cement and coal gasification projects will be located in less remote areas of the Province, and will not likely require the same levels of indirect expenditures and manpower to develop social and community infrastructure, vis-a-vis oil sands projects.

9. The most serious construction labour pressures exerted by proposed projects will be in the skilled mechanical trades. The supply of pipefitters and pressure welders is of special concern.

10. With regard to operating manpower requirements, none of the anticipated projects, with the exception of the coal gasification plants, requires nearly the labour force of an oil sands operation.

11. Engineering, design, and project management services may account for as much as 15% or more of the cost of developing a major resource project. Alberta industry cannot be expected to participate in the proposed projects to a high degree until the breadth and depth and experience of individual firms is substantially enlarged.

12. The Alberta economy is constrained in its ability to provide a substantial share of the materials, machinery, and equipment required in the construction of new industrial and resource projects by the Province's limited manufacturing capacity. These inputs may comprise 50% or more of the completed costs of major projects.

13. The material and equipment requirements for the proposed resource projects are of a generally similar nature and the purchase of some highly manufactured components is subject to world-wide competition. Hence, supply availability beyond the control of the Province may affect the rate of development of major projects in Alberta. Other studies have identified the following potential problem areas: steel, walking draglines, high-specification reactor vessels, castings and forgings, and alloying metals.

14. The opportunity to draw labour requirements from beyond the

Province to meet local supply deficiencies, as in the case of Syncrude, cannot be relied upon in the future. This is an important reason to schedule major projects in such a way as to minimize dependence on outside sources and maximize local participation. The inherent problems faced by the provincial manufacturing and engineering industry is one of gearing up to handle infrequent major projects. These industries are generally small and confined to the local market, and in the absence of an economic scale of operations, they cannot provide the capacity to meet occasional large increments in local demand.

15. In terms of northeastern Alberta development opportunities, the exploitation of the oil sands offers the primary stimulus to further economic growth. Manufacturing potential in the area is limited and indirect and service employment will be largely determined by growth in the primary economic sector.

16. The potential scope for future development in the Northeast Region has been examined,as below:

(a) primary resource development;
(b) by-product processing related to the oil sands and other resource developments;
(c) direct service and support industry for (a) and (b);
(d) indirect service and support industry for the urban population generated by the above.

Direct service or support industries with future potential include specialized laundries serving the industrial market, revegitation industry, direct petrochemical processing from bitumen, oil drilling support industry, and welding and electrical contracting firms. A number of opportunities exist for service-oriented businesses serving the urban population in the area, such as contracting firms for residential and commercial building repair and maintenance; prefabricated housing construction; retail, recreational, entertainment and social facilities; and automobile sales and service businesses.

The following is a summary prepared by the
Northern Development Branch
of

Family Planning in Alberta Series With Special Reference to Volume 3, Population: Socio-Economic Factors

Volume 3 authored by Wayne W. McVey, Ph.D.
Department of Sociology
The University of Alberta
Edmonton, Alberta
August, 1976

Volume 3 sponsored by the Northern Development Branch and
Alberta Social Services and Community Health

Series produced under
the direction of Stanley Greenhill, M.D., and
R. Bruce Morrison
Department of Community Medicine
The University of Alberta

Volumes 1,2,4,5, & 6
sponsored by the Family Planning Division of
Health and Welfare Canada

Background & Objectives

The Family Planning in Alberta Project began in September, 1974 following discussions between members of the study team and Alberta government officials relating to: (i) assessment and evaluation of existing federally funded provincial family planning programs, and (ii) development of data to determine the need for future family planning services.

The project's prime objectives are threefold:

- to determine what provincial services are currently available;
- to assess their effectiveness; and
- to compile demographic baseline data that will aid in the planning of future family planning services

Findings & Recommendations (if any)

Volume 1: Population

This report is an effort to utilize basic demographic data in the complex task of health planning, with special reference to family planning. It is becoming increasingly clear that in order to provide adequate health services and to develop health policies and programs for the provincial population, the health official and planner must have access to the best available indicators of demand and need. The concept of risk population as used in this report refers to specific age groups by sex and location which are most likely in "need" of family planning services and programs.

The main thrust of this volume is to retrieve and manipulate basic age and sex data from the most recent (past) census to provide "risk" population indicators in future health planning. By using summary measures (i.e. the fertility ratio and the aging index) and graphic presentations of the age and sex structure (i.e. age-sex pyramids), the research team was able to isolate specific age groups at risk to childbearing. This information could then be used to determine which communities (i.e. non-metropolitan communities of over 1,000 inhabitants) or Health Units are the best target areas for the purpose of efficiently allocating family planning materials.

Volume 2: Family Planning Services Inventory

At the close of 1975, work began on compiling an Inventory of Family Planning Services. Information on existing practices and programs was solicited by means of a mail survey circulated to all those sources which could conceivably be involved in providing family planning or human sexuality information. Questionnaire responses by study populations were as follows:

	Number Sent	Number Returned	Proportion Returned
Physicians	1353	823	61.4%
Local Health Units	29	29	100.0%
Victorian Order of Nurses	7	6	85.7%
Hospitals	132	113	85.6%
Municipal Social Workers	100	59	59.0%
Provincial Social Workers	90	63	70.0%
Preventive Social Services	18	12	66.7%
Child Care Institutions	67	23	34.3%
Other Social Services	38	28	73.7%
School Superintendents	104	72	69.2%
School Principals	413	202	48.9%

Since confidentiality was assured, all data were aggregated. A private research group was engaged to number the questionnaires, code and tabulate the data, and organize the material for computer analysis. The categorizations used for grouping data were type of service offered, selected demographic characteristics, and health unit. All comments were listed by respondent type and question.

The bulk of Volume 2 presents the results of this mail survey, with a chapter devoted to each of the study populations. An additional chapter provides (from official documents and interviews with staff) some basic information about the organizations which are providing family planning services as their primary function.

Members of family planning organizations, physicians, and others suggested both through the survey data and through interviews that there is an abysmal lack of knowledge about contraception and sexual matters among their clients and particularly the young. Some physicians suggested that adequate contraceptive information among the young would abate the rising rates of illegitimacy and abortion in the province.

The survey, although brief, suggested that young people are not approaching the traditional sources, such as physicians, hospitals, or health units for contraceptive advice. Rather they are seeking help from voluntary family planning associations, family planning clinics, and social service agencies. Naturally, these agencies, with the exception of the clinics, cannot prescribe contraceptive devices, but they do provide much needed information and counselling. They also refer clients to physicians whom they consider sympathetic.

In the survey, agencies and persons from a variety of persuasions requested access to family planning resources in order to meet the increasing demands they see for services. There were requests for materials, staff training, school curricular guides, and funds. This suggests that it is time for the provincial government to make a public policy supporting family planning in Alberta. For only with an official sanction can the various governmental agencies justify staff time and programming devoted to family planning.

Volume 3: Population : Socio-Economic Factors

This is a companion to Volume 1 which focussed on the age and sex structure of Health Units and selected communities. Volume 3 provides a matching series of socio-economic profiles. The research team used 1971 Census of Canada data to portray in tabular and graphic form, the distribution of key social and economic variables by Health Unit. The intent was to add to the demographic information on "risk" populations (Volume 1) additional information necessary to make decisions regarding appropriate tactics and strategies in family planning, as well as to make realistic allocations in funds, resource personnel, and materials.

The fertility, or actual reproductive behaviour of Canadian women is an outcome of the prevailing values and attitudes concerning family size. These values and attitudes are subject to change or modification through the influence of many social and cultural factors. Among these are:

- It is no longer necessary to have a large number of births per family to insure the survival of two or three children to maturity.

- A shift in the value placed upon having children has occurred with the diminution of the agrarian economy in Canada. When the family acted as a productive unit, the child was important as added manpower. Also, the lower life expectancy and lack of institutional services necessitated having children for social support when parents became too old or disabled to be productive.

- With the change to an urban-industrial economy, children were increasingly viewed as liabilities. Also, when the number of years of required formal education was increased, so too did the period of time that the child depended upon his parents.

- Despite the increase in birth rates in Canada between 1947 and 1958 ("the baby boom"), the average family size continued its downward trend.

- During the post-war prosperity of the 1950's, many Canadian couples balanced the increasing cost of raising children against the acquisition of luxury items.

- Increasing labour force participation by females has had its implications for family size. The wife's income is often an important addition to total family income and maintaining a life-style might depend on avoiding or reducing the risk of conception.

- Canadian society is characterized by occupational mobility as a means to occupational success. The child can interfere with mobility.

- The mass media has promoted the "good life" and values associated with small families.

- The housing construction industry has become preoccupied with building apartments, row-houses and single-family houses with fewer bedrooms designed for children.

There are, of course, variations in family size within the Canadian population. Each one of the wide variety of racial groups, ethnic groups,

religious affiliations and social classes may have different birth rates and different views as to the ideal family size. However, by understanding the fertility behaviour of homogeneous segments of the total population, it is possible to determine each respective segment's contribution to the overall fertility of the province or country.

Conclusions regarding the "risk" populations (Volume 1) -- when coupled with significant differences in fertility behaviour by various characteristics such as ethnic origin, religious affiliation, educational attainment, labour force activity, and income (Volume 3) -- permit the family planning professional to predict with greater efficiency the potential for childbearing by Health Unit and community.

Volume 4: Family Planning and the Community

Volume 4 contains the analyses of all the federally funded Family Planning Projects mentioned in Volume 2. In addition, two ongoing area projects were selected for special attention. Because of the sensitive nature of the data, it was felt desirable to disguise the names of the towns, Health Units, and people as much as possible. The case study method was chosen so as to provide a broad understanding of the many factors at work in the provision of family planning services. During the four months they spent in the field, the researchers conducted unstructured interviews, often on a very personal level and in conditions which were unfamiliar to them. They were urged to be sensitive to the situations that developed and record their own personal reactions in a field diary separate from their scientific observations. In this way, the researchers could later discuss with some sensitivity and accuracy what was objective and what was the result of their subjective impressions.

The first chapter contains profiles on each of the ten family planning projects which were federally funded in the province between 1973 and 1975. Each profile describes the region, the project, and the staff's assessment of the project's success or failure and future. In contrast to the apparent success of both urban clinics and family planning associations, the family planning "clinics" (regardless of how they were defined) failed, despite the fact that in some instances the Health Unit staff had solicited and received some public support for their activities.

The volume then deals with a Health Unit in East-Central Alberta. Background descriptions are given of the Health Unit area, the towns and

villages encompassed in it, and the family planning project. An analysis is made of why the clinic failed and what the current status was of the Health Unit's family planning work. Then follows a section on community opinions regarding the project.

Another area project selected for special attention is located in a Health Unit in northern Alberta. This area project, like all of the federally funded projects, arose out of the concern of people within an agency rather than from a community base. In an effort to understand how people in one community within this Health Unit felt towards family planning, the researchers solicited comments from key people from various agencies and organizations or sectors of the community. Most of the Eurocanadians felt that the program put on by the Health Unit was worthwhile. Their main criticism was that it did not begin soon enough in the students' career and that it was not comprehensive enough. After interviewing some Native people, the researchers were unable to state categorically whether Native people in remote settlements or in the towns wished to have family planning. Many of the comments they received attested to changes that were occurring in the communities which affected attitudes toward family planning.

It is important to recognize that family planning is indeed a social action program. It is concerned with the transmission not only of specific medical-biological concepts and procedures, but with the transmission of values. This is why community support and cooperation is so important and why such programs will be more effective if they are not simply "layed on from the top". It is suggested that community organizations which apply for funds to operate programs demonstrate not only that a need exists for such services, but that such a need is locally recognized and mobilized in terms of support for their programs.

If family planning services are to be available to Albertans on a general basis, there is an urgent need for top level government policy and support. This volume and Volume 2 illustrate some of the successful and imaginative ways in which agencies, organizations and institutes have gone about providing family planning services. Yet these exist for the most part as isolated examples. Adequate comprehensive service delivery requires a mandate which supports the incorporation of services and programs within appropriate agencies and which allocates appropriate financial and human resources to the task.

Volume 5: Population: Edmonton and Calgary

This is a companion to Volume 1. It presents age and sex distributions and related analyses for the Calgary and Edmonton Metropolitan Areas using 1971 Census of Canada data.

Volume 6: Summary

Upon completion and review of the first five volumes, it was perceived that a condensed, workable summary volume would be necessary for distribution to the Health Units. Volume 6 contains three parts; the first concerns family planning services in Alberta, the second summarizes an evaluation of existing family planning programs, and the third presents demographic profiles of each Alberta Health Unit.

The following is a summary prepared by the
Northern Development Branch
of

Northern Transportation Study: An Overview of Alberta's Role in Northern Transportation

Authored by The Grimble Consulting Group
Edmonton, Alberta
September, 1976

Sponsored by the Northern Development Group

Purpose

An overview of Alberta's role in northern transportation is needed so as to provide (i) a framework into which specific studies can be referenced, (ii) a state of the art identifying issues and activities, and (iii) information on some of the obvious gaps. The authors see this study as performing a "starter" role.

Background

The Province of Alberta historically has been the Gateway to the North. Because the natural transportation corridors, the rivers, ran through Alberta, Alberta became the supply centre for goods and services to the North. These supply routes contributed significantly to the development of many Alberta communities and permitted transportation facilities to be built which otherwise would not have been justified on the basis of a demand of these centres themselves.

Because of this strong historical relationship to the North, it has been assumed by Albertans that Alberta will automatically continue to play a role as a major supply route to the North. Although the historical and geographical advantages Alberta has enjoyed to date will continue to be advantageous in maintaining its role as a supply centre, it is clear that activities in other provinces and in the Territories themselves will severely influence the ability of Alberta to continue to act as the Gateway to the North. The ability of Alberta to retain this role is dependent on maintaining the transportation strategy which provides the cheapest and most efficient links between the supply centres of the southern and northern communities. In developing such a strategy, one must be aware of the transportation planning activities and policies of the other provinces and of the Territories, one must consider all modes, and one must consider the impact of economic factors and regulatory practices.

Specific Objectives

The objectives, or terms of reference, for this study may be listed as follows:

1. To provide an overview of transportation between the developed communities in the Western Provinces and the North including the Yukon, Northwest Territories, the northern parts of the Provinces of Alberta, Saskatchewan, Manitoba and British Columbia.

2. To identify and provide a broad interpretation of the implications and the present strategies being pursued by other jurisdictions.

3. To identify specific questions and issues of importance to Alberta, which need to be investigated in order to determine an appropriate policy strategy to maintain a strong role for Alberta in northern transportation.

4. To review routes proposed in Northeast Alberta, in particular between Fort McMurray, Fort Chipewyan and Fort Smith as they relate to Alberta's role in the North. Although it was originally intended to utilize the work of other engineering studies for route locations to the Northeast, a more detailed analysis was performed of alternatives for route selection. The results of this route analysis are included in a substantial appendix to the report entitled "Northeast Alberta Road Location Study".

Methodology

The approach of the study was to provide a statement of probable transportation developments based on the extensive experience of the principal investigator, dialogue with knowledgeable individuals, and information gathered from a diverse set of resources on present northern transportation planning. These resources included an extensive accumulation of reports and published material from periodicals and newspapers (which are listed in an appendix to the report).

Principal Findings

From an examination of the present and potential access routes from Southern Canada to the three northern areas outlined, it is apparent that unless significant initiatives are taken by Alberta to penetrate the Northwest Territories with new surface routes or through other strategies, Alberta will be outflanked by developments in other provinces.

The present halt to construction of the Mackenzie Highway at Wrigley has effectively put a lid on Alberta's opportunity to maintain that route as the dominant surface transportation corridor to the Far North. In the future, the Dempster Highway and perhaps a road along the Polar Gas route would outflank the Mackenzie Corridor. The policy options open to Alberta to maintain its position may be as follows:

1. The development of an alternative surface route to the northeast of the Province to serve the Eastern Arctic.
2. The utilization of Pacific Western Airlines and air facilities as a competitive mode of transport.
3. The development of innovative approaches to transportation whether in technology or institutional arrangements.

Within the northwest transportation area, British Columbia and the Federal Government are investing in transportation systems to direct traffic to Prince Rupert. Since the logical service area for Prince Rupert includes Northern British Columbia, the Yukon and perhaps the Mackenzie Valley, it is likely that a transportation strategy will emerge to direct traffic from these areas to terminal points in British Columbia. The development of these additional surface transportation routes would severely affect Alberta's role as a supplier to the Mackenzie Valley and Delta.

Within the Central Northlands of the Eastern Arctic and the Prairie Provinces, a pattern for surface transportation has yet to be developed. However, the development of the Cluff Lake Road and perhaps the building of the Polar Gas route will soon alter that situation. Alberta has the opportunity now to establish a surface transportation network through the northeast part of the Province to provide a link to the Eastern Arctic. However, such a route would require the cooperation of the Federal Government

in road construction through Wood Buffalo National Park and in the Northwest Territories east of Great Slave Lake.

In examining the alternatives for future surface transportation routes to Northeast Alberta, it is the conclusion of this report that the decision on location must be made so as to maximize Alberta's access to developments outside of the Province. The criteria for route selection should be based on maintaining routes between Alberta's role as the Gateway to the North. This means that such routes must provide year-round access. Access to Alberta communities should then be served from this major route.

At the moment, Alberta's role as the Gateway to the North is dependent upon the competitive advantages and monopoly of surface transportation enjoyed by the barge system on the Mackenzie and Athabasca Rivers. As long as these systems remain a monopoly and are competitive with new road and rail systems being constructed, Alberta will continue to play a dominant role in northern supply. However, if these other modes or routes become more competitive either because of cost increases, changes in the allocation of real cost to the users (i.e. assessing the improvements of the river channel back to the carriers), or because of improvements to other systems, barge traffic may see a severe decline, with the result that Alberta would play a much reduced role as a supplier to the North.

STRATEGIC RECOMMENDATIONS

1. Alberta should commit itself to establishing an all-weather surface route from Fort McMurray to Fort Smith and should advocate a central transportation corridor from Fort Smith to the Arctic coast via a route east of the Great Slave Lake. An early commitment to and the construction of a minimal standard link would establish Alberta as a route for surface transportation to the Eastern Arctic and deter the development of other transportation routes.

2. The preliminary results of the analysis done in this study for the Fort McMurray-Fort Smith route should be followed up with cost estimates and detailed examination of the geotechnical constraints in the critical areas as identified. A program of field checks should be worked out with Parks Canada to establish definitively the engineering problems of a route through Wood Buffalo National Park west of Lake Claire.

3. In the analysis of the alternative routes to serve Northeast Alberta, an evaluation of the routes should be based primarily on how the route would influence Alberta's role in northern transportation, and secondarily on how Alberta communities would be served. Access to Alberta communities such as Fort Chipewyan should then be integrated into the overall transportation network, oriented to serving the North. Previous decisions which were instrumental in the construction of the Mackenzie Highway north from Grimshaw, and later the Great Slave Lake Railway, established a transportation system which (i) neglected northeast Alberta, and (ii) became oriented solely to the Northwest, such that it could not also serve the Central and Eastern Arctic.

4. A northern transportation strategy should be developed, giving primary attention to how an Alberta transportation system could be used to serve developments and communities north of the borders of the Province and even in the northlands of the adjacent provinces.

5. Because of the lack of future surface links between Alberta and the Northwest, given the termination of the Mackenzie Highway at Wrigley and the completion of the Dempster Highway through the Yukon to Inuvik, Alberta should encourage the use of air transportation by providing facilities and competitive air freight tariffs between Alberta and the North to establish a competitive alternative to the new surface routes. Alberta, by virtue of its ownership of P.W.A., is in a position to influence shipping costs to the North. If it were to establish an air freight rate competitive with other modes, P.W.A. would be able to dominate the general goods freight shipping system to the North, leaving only bulk materials and low value goods to be moved to the Mackenzie Delta by the Dempster Highway or by the barge system.

The following is a summary prepared by the
Northern Development Branch
of

Engineering Report on Feasibility Study of a Proposed Trout Rearing and Processing Operation at Grande Cache, Alberta

Authored by W.L. Wardrop & Associates Ltd.
Edmonton, Alberta
October, 1976

Sponsored by the Northern Development Branch and
Alberta Agriculture

PURPOSE

The purpose of this study was to analyze the feasibility of using waste heat from the H.R.Milner Power Generating Station at Grande Cache, Alberta, to heat Smoky River water for the production of 0.96 million kilograms (2.1 million lbs) per year of dressed rainbow trout for human consumption (i.e. 1.14 - 1.36 million kilograms or 2.5 - 3.0 million lbs. live weight).

BACKGROUND

Aquaculture has been practised for at least 4,000 years, mainly in the warmer areas of Asia and the Mediterranean. Historically, aquaculture has been a low-capital-cost, labour intensive cottage-industry producing fish for local consumption.

Commercial intensive aquaculture is a more recent phenomenon. Some successes have been obtained -- generally as a result of favourable local conditions such as in the Snake River, Idaho or in Japan where both labour and trash fish for food are plentiful. Experimental, intensive, commercial undertakings in North America have not yet succeeded in providing significant amounts of fish for human consumption.

To be successful, aquaculture requires water, a commercially desirable species, knowledge of propagation and rearing techniques, an economical supply of food, and -- in northern latitudes -- an economical source of heat for raising water temperatures.

Intensive, large scale aquaculture has not been attempted in Canada. In Western Canada, rainbow trout culture has been widely practised by planting fingerlings in winter-kill lakes in the spring and harvesting the fish in the fall. But extensive culture does not show commercial promise because of winter-kill, the seasonal nature of production, and the logistics of collecting and marketing the product.

Previous studies for the Alberta Department of Agriculture have indicated a potential for intensive aquaculture in Alberta using waste heat. Ground-water in the region is limited in supply and is usually 4^{o} C or colder; the plentiful surface waters range in temperature from 1^{o}C or lower in winter to 20^{o} or higher in summer. The use of low grade waste heat from industrial processes to maintain water temperatures in the range needed for fish culture is attractive, since it would make 15^{o}C water available for 12 months

without incurring the large fuel costs otherwise required. This economy could make the difference between a viable and an uneconomic undertaking.

Rainbow trout is the species selected for consideration in this feasibility study. It is desirable for human food. As a result of years of culture, semi-domesticated strains have been developed. Rainbow trout are hardy and can tolerate and adapt to a wide range of conditions. Also, more is known about propagation, feeding and culture of rainbow trout than perhaps for any other suitable fish species.

FINDINGS

The H.R. Milner Site

The proposed trout rearing facility at Grande Cache will require waste heat transferred from the cooling water effluent of the H.R. Milner Power Generating Station. Without additional heat, any shutdown or reduction in operation of the plant below 59.2% of capacity during winter months would be disastrous for the trout rearing facility. The cost of installing standby heating sources (oil or gas fired boilers) was included in capital estimates but not the operating cost estimates. Maximum cost relief would be provided if the H.R. Milner Plant were a multiple-unit baseload thermal or nuclear power plant.

Alberta Power Limited has stated that an aquaculture facility adjacent to the H.R. Milner Plant or other generating stations would be acceptable as long as it did not increase the costs of producing electricity or interfere with operation of the thermal plant. Costs of modifying an electric generating station so that waste heat can be used to raise trout can be quite readily assessed. Operation of the two associated industries would require close cooperation in terms of changes of heat output resulting from emergencies or base demand loads. Whether or not such cooperation could be regarded as interference with smooth operation of a thermal electric generating station is open to interpretation.

The Smoky River

The Smoky River carries adequate supplies of water for raising 0.96 million kilograms of rainbow trout, as long as facilities are incorporated to

remove high sediment loads occuring during periods of high run-off. At the historic mimimum flow of the Smoky River, about 30% of the water would be required for rearing the projected amount of trout.

The operation of a trout rearing and processing facility will produce a large quantity of contaminated water -- both from the raceway system and sanitary wastewater from washrooms and process wastewater from the fish processing area. The estimated capital cost for an extended aeration package plant to handle the expected wastewater flow is $110,000.

Raceways

This report recommends a poured concrete raceway with a sloped V-bottom, enclosed in a stable building. Concrete offers advantages over epoxy-fibreglass, compacted soil, plastic lining, or cinder block. It has strength, durability, a smooth non-abrading surface, and readily lends itself to achieving the desired design conformations.

Systematic studies of raceway design for intensive aquaculture have not been undertaken. Because of low air temperatures and ice fog in winter, and predation by birds and animals, open raceways are probably unsuitable for the proposed facilities at Grande Cache. Enclosures must be able to withstand snowloads and wind, while at the same time allowing for the raceways to be large and accessible (for feeding, manipulation of the fish, and cleaning).

Fingerlings and Fish Food

Ideally, fingerlings should be available in uniform supply over 12 months of the year. Unfortunately, there is insufficient supply for even one major rainbow trout facility in Western Canada. Dependence on imports of fingerlings from the United States is hazardous, both in terms of quality and quantity. Until there is a broodstock and fingerling industry in the region, any large scale rainbow trout facility is in a position of vulnerability to supply failure. Similar supply problems exist with fish food. It is questionable whether sufficient food of standard and reliable formulation could be guaranteed at a reasonably firm price.

Market Potential and Economic Evaluation

There is market potential in Alberta sufficient to absorb the production of 0.96 million kg. per year of rainbow trout envisaged in this report. If an attractive price and a steady supply of high quality product could be realized, a much larger market in Alberta and in the Prairie region is possible.

From the analysis in this report, as well as from previous studies, it appears impossible to assess accurately the costs associated with an intensive commercial aquaculture industry either in the Province of Alberta or in Canada. References to apparently successful ventures in other countries are irrelevant to the climatic features, social structure and economic-financial situation in Canada. Cost estimates in this study which, as in others, omit some components that cannot be evaluated, indicate a price advantage of $0.50 - $1.15 kg for frozen rainbow trout imported from Japan over a domestic product. This diversity of projected costs underscores the lack of information essential to analyze the feasibility of a commercial trout raising venture.

CONCLUSION & RECOMMENDATIONS

An intensive aquaculture facility at Grande Cache, Alberta using water from the Smoky River and waste heat from the H.R Milner Power Generation Station, is technically possible, but economically not feasible. A commercial intensive aquaculture industry may nonetheless be feasible at other sites. The consultants therefore recommend that:

(i) priority be established for aquaculture in the Province of Alberta;

(ii) preliminary investigations be carried out regarding potential sites; and

(iii) a pilot plant feasibility study be performed as a means of obtaining critical operating data.

The following is a summary prepared by the
Northern Development Branch
of

Agriculture in Northern Alberta: An Introductory Study

Authored by Carcajou Research Ltd.
Edmonton, Alberta
August, 1977

Sponsored by the Northern Alberta Development Council

PURPOSE

The purpose of this report is to outline the agricultural situation in northern Alberta for the Northern Alberta Development Council.

BACKGROUND

The Council requested Carcajou Research Ltd. to prepare (i) a comprehensive outline describing the major issues in northern agriculture which merited Council's attention, and (ii) a discussion of ways in which these issues could be approached.

Northern agriculture is an exceedingly complex phenomenon, and it would take a labour of years to describe and analyze it fully. In view of this, the consultant made it clear that the treatment of the topic in his report was somewhat superficial, in the sense that many facts needed to justify statements could not be included. However, as events turned out (notably the NADC-sponsored Agriculture North Seminar held in Peace River on November 22-24, 1978), this introductory study played an important role in highlighting issues and strategy options in northern agriculture.

OBJECTIVES

The terms of reference stated that the outline was to cover:

(i) the present agricultural situation and changes that have occurred since about 1970;

(ii) the present trends and problems in northern agriculture;

(iii) the present state of research and development in northern agriculture; and

(iv) suggestions and recommendations for the Northern Alberta Development Council, especially on ways of applying their ideas on economic development to the agricultural situation.

METHODOLOGY

Information was gathered from published statistical data, from existing reports, and from interviews with officials of the Alberta Department of Agriculture, principally the District Agriculturists (DA's) in northern Alberta and staff members of Regional Offices.

Twelve district offices were visited, from Bonnyville to Ft. Vermilion, and all three regional offices, in Fairview, Vermilion and Barrhead. Interviews were also carried out at Agriculture Canada's research station at Beaverlodge and experimental farm at Ft. Vermilion. Additional interviews were held with officials of Alberta Agriculture in Edmonton. No organized effort was made to talk with farmers; however, opportunities to do so were not missed.

PRINCIPAL FINDINGS

This study examined fourteen basic points:

1. Agricultural Research

Research has always been a key component of agriculture but it is vitally important in northern Alberta. Good northern agricultural research would dramatically improve the extremely slow and costly process of trial and error which presently characterizes the way in which agricultural improvements are made in the north.

2. Agricultural Extension

The development of an extension concept directly attuned to northern Alberta has been advanced by Alberta Agriculture. The purpose of this concept would be two fold; first to develop methods of extension appropriate to northern areas; and secondly, to train both extension officers and the farming community in their use.

3. Mixed Farming

The theory behind mixed farming is that a farmer who produces several products is not absolutely tied to the fluctuating fortunes of any one of them. The mixed farmer may miss the opportunity to make very large profits in years when prices for one product are very strong, but he also avoids the years of large losses when they are weak. This feature is particularly important to farmers with a large portion of debt and other fixed commitments.

4. Off-Farm Work

Despite difficulties that may result from off-farm work, agricultural personnel reported that many farmers in northern Alberta rely on this type of supplementary income. Off-farm work generally takes place in the oil and lumbering industries.

5. Farm Credit

The misuse of credit is identified as a major area of concern for farmers. Blame has been placed on inadequate accounting systems and the tendency for debt counselling to be initiated only when a farmer's situation is beyond help.

6. Housing

There is often a reluctance to go further into debt for non-income producing improvements until the farm's efficiency is substantially improved. Thus housing passes through a progression from substandard to permanent home, or cabin to mobile to permanent home, depending upon the economic fortunes of the farm.

7. Agricultural Processing and Marketing Facilities

The development of additional processing and marketing facilities in northern Alberta is impeded by a lack of facilities which cannot be built until supply increases, and supply will not increase without facilities. This is a common situation in northern Alberta, and it seriously affects a whole range of possible economic opportunities.

8. Transportation

A good transportation system is essential to agricultural development in northern Alberta. Distances are a significant handicap in themselves, but the burden would have been impossible had not improvements in the transportation network been made during the past seven years.

9. Veterinary Service

Veterinary service is a necessary part of the agricultural infrastructure. Until this service is available, livestock production in the north will be retarded. On the other hand, until there is an adequate supply of livestock, it is difficult to induce a veterinarian to begin practice.

10. Northward Expansion

The present government policy on new land means opening small parcels at the edge of existing developed areas. The problem is, however, that fringe areas are notoriously difficult to service and maintain because they are further removed from service centres.

11. Land Price and Agricultural Value

The Northern Alberta Development Council recognizes that land pricing is a very complex issue which is difficult to solve. However, for the affected areas in northern Alberta, a partial solution lies in improving the economics of northern farming through applied research.

12. Lime for Acid Soils

A large area in northern Alberta requires a lime application to sustain productivity. However, the problem is affected by the lack of a good local supply of lime.

13. Land Development and Drainage

The land surface of northern Alberta farms is, for the most part, several hundred feet above the main river valleys. But for farmers near river valleys natural erosion and slumping will have a severe effect on agricultural production, especially since topsoil is generally shallow throughout the affected area.

14. Community Pastures

Ten of the 19 provincial grazing reserves are located in northern Alberta. In addition, there are about thirty grazing associations in northern Alberta compared to fifty in the rest of the Province. Northern farmers seem generally satisfied with the availability of community pastures.

RECOMMENDATIONS

The Northern Alberta Development Council was advised to:

1. Revise the report to incorporate recent data and comment.

2. Publish the revised report and solicit public reaction.

3. Sponsor a major seminar on northern agriculture for farmers, agriculture officials and members of the agricultural public, similar to concept to the 1976 Transportation Seminar.

4. Give individual treatment to issues leading to policy recommendations. This might require further research and discussion, depending on the nature of the issue.

The following is a summary prepared by the
Northern Development Branch
of

Victor Lake Co-operative Ltd.
(of the Grande Cache area) Handbook

Authored by Applied Research Associates Ltd.
Ponoka, Alberta
September, 1977

Sponsored by the Northern Development Branch

PURPOSE

This study was prepared for the members of Victor Lake Co-operative as part of a project sponsored by the GrandeCache Native Area Development Committee with funding from the Northern Development Branch of Alberta Business Development and Tourism. The handbook was designed to facilitate the operation of the Co-op by its members and especially by its Board of Directors.

BACKGROUND

The Victor Lake Co-op is one of five organizations formed in relation to a land settlement between the Government of Alberta and the native people of the Grande Cache area of Alberta. In addition to the Victor Lake Co-op, there is the Suza Creek Co-operative, Muskeg Seepee Co-operative Limited, Grande Cache Lake Enterprises and Joachim Enterprises. The co-operatives were formed under the Co-operative Associations Act of Alberta and the latter two names refer to limited partnerships created under the Partnership Act of Alberta.

Approximately 840 acres of Crown land were transferred to Victor Lake Co-operative Limited by the Minister of Lands and Forests, by way of a Memorandum of Agreement dated May 28, 1973. At about this time, a group of ten native residents submitted a Memorandum of Association to Alberta Consumer and Corporate Affairs requesting approval of Victor Lake Co-operative Limited under the Co-operative Associations Act. Registration of the co-operative was completed in early August and the first members' and directors' meetings were held on August 10, 1973. According to the minutes of these meetings, there were 52 charter members, including 31 minors.

SPECIFIC OBJECTIVES

This project had three stated objectives:

(i) to try to ascertain the reality of the land tenure settlement ;
(ii) to demystify that into laymen's terms; and
(iii) to provide the co-op members with information and skills to assist them in fulfilling their responsibilities.

The authors began with a discussion of the land tenure settlement that led to the creation of the Victor Lake Co-operative. They then went on to describe the legal instruments of the co-operative - the Memorandum of Association, the Standard By-laws and the Supplemental By-laws. The next section started with how the co-op works together as people, and closed with items of a business management nature. To recap, seven administrative procedures were noted which have to be looked after by the co-op. Some of these -- such as the submission to the Province's Director of Co-operative Activities of an annual financial statement -- are yearly obligations.

The consultants have appended to the text of the handbook copies of the legal documentation relating to the establishment of Victor Lake Co-operative Limited.

PRINCIPAL FINDINGS

Much of the material presented in the handbook is familiar reading to persons with experience in co-operatives in Alberta. Nevertheless, there are certain unique characteristics of Victor Lake Co-operative spelled out in the Memorandum of Association. Among these are:

(i) The reason the Co-op was set up was to receive, hold, improve and use land and to do things of a business nature (like market gardening, cattle ranching, outfitting and guiding, etc.) on and with that land.

((ii) Membership is restricted to the native settlers who settled in the Grande Cache district before the year 1960, and their immediate relatives and decendents.

(iii) There shall be no share capital in the Co-op.

(iv) If the Co-op wants to change the Memorandum of Association, close down the Co-op or throw out a member, a meeting of the members must be held, the Chairman and Secretary of that meeting must write up the decision and this must be approved by the Province's Director of Co-operative Activities.

There is also one significant restriction contained in the Memorandum of Agreement (i.e. the land tenure agreement). Clause Five restricts the Co-op's right to use the land when that use involves giving any interest in that land to outsiders. However, there is a difference of opinion

on the interpretation of this clause. The Province's Native Secretariat presently requires that any conveyance, including incidential right-of-entry, requires Cabinet approval. The authors of the handbook suggest that, because a rigid interpretation of the restriction threatens all attempts to foster independence for the native people of Victor Lake Co-operative, a court judgment should be sought to clarify this issue.

STRATEGIC RECOMMENDATIONS

Other than the issue mentioned immediately above, the handbook contained no formal recommendations. Persons whose questions or concerns are not addressed in the handbook are advised to seek outside help.

The following is a summary prepared by the
Northern Development Branch
of

Economic Development of Northern Alberta

Authored by The Northern Alberta Development Council
Edmonton, Alberta
December, 1977
Sponsored by The Northern Alberta Development Council

PURPOSE AND BACKGROUND

This is a Northern Alberta Development Council position document on economic development of the North. The overall intention is to present a framework of principles which could be used as a guide for northern economic development.

The Council worked on this document for several years. The final version was completed in December, 1977 and debated during the spring and fall 1978 sessions of the Alberta Legislature. It has been circulated very widely in an effort to communicate ways in which economic development can effectively occur in the North. Communities, industry, and government departments have been encouraged to utilize the philosophy and principles contained in the document when they formulate economic development strategies.

METHODOLOGY

"Economic Development of Northern Alberta" is not a study as such, but a gathering of information and syntheses of many ideas, public briefs, conferences, and research previously submitted to, or sponsored by, the Council. The "Opportunity North" Conference held in 1975, some twenty-six public meetings in northern communities, and eight research projects all fed into the process of developing the document.

PRINCIPAL FINDINGS

The document is divided into two major sections, each having several sub-headings denoting aspects of economic development.

A. The Philosophy of Northern Economic Development

This section discusses the fundamentals involved in a proposed economic development strategy for the North.

1. Economic Goals for Northern Alberta: The Meaning of Balanced Growth

   The importance of maintaining a unique quality of life in the North, while at the same time promoting balanced and orderly economic growth.

2. Strengths and Weaknesses in the Northern Economy
   Strengths of north natural resources, transportation corridors (Gateway to the North), opportunities for people.
   Economic weaknesses - costs, infrastructure, small market concentrations, transportation.
3. The Role of Government
   The Provincial Government influences development through regulations, techniques designed to create a healthy economic climate and by being the major land and resource owner.

B. Nature and Application of Development Tools

This section provides a more specific description of the techniques the Council feels Government should employ to assist northern economic development. It describes four main areas of program possibilities:

1. Technical Support
   This is generally the resources of government staff and their expertise.
2. Research and Development
   Government expertise and/or government funds used to provide feasibility research on potential developments.
3. Infrastructure
   The location of industry is influenced by the infrastructure available; as infrastructure is provided there is more likelihood of industry relocations.
4. Financial Incentives
   The loan is the basic incentive plan recommended by Council. However, there are situations when grants, special projects and tax incentives may apply if the social and economic gains merit a special government program. Established businesses should not be damaged by specific industries which may require initial assistance.

CONCLUSION

The main concerns of Council are: economic disparities and costs of establishing an economic base in the North. Northerners themselves have a responsibility to explicitly state their real needs in a coordinated fashion, while at the same time not making endless demands on the public purse.

Government can assist in development as a partner to the efforts and planning of northern Alberta residents. Government can be a positive factor in meaningful economic development if the "tools" are applied in a manner that is consistent with the philosophy and principles outlined.

RECOMMENDATIONS

No recommendations are given.

The following is a summary prepared by the
Northern Development Branch
of

Community Economic and Employment Survey

Authored by Peter C. Nichols and Associates Ltd.
Edmonton, Alberta
June, 1978

Sponsored by the Northern Development Branch

PURPOSE

The purpose of this survey was to briefly assess the job opportunities of unskilled and semi-skilled workers in the communities of High Level, Peace River, Fox Creek, Whitecourt and Edson.

SPECIFIC OBJECTIVES

This survey dealt with present employment situations and potential job opportunities in the five areas listed. Some of the more obvious growth restraints were explored.

METHODOLOGY

As each community is basically unique, they are examined individually.

Town of High Level

Background

The community is located 500 miles northwest of Edmonton, 200 miles north of Peace River. It is the largest urban centre in a 40,000 square mile area of northwest Alberta, bordering the Northwest Territories and British Columbia.
The town has a diversified economic base, related to oil and gas, forestry and lumber, and agricultural activites in the area. High Level also serves as a transportation hub and, to a growing extent, as a service and administrative centre in the northwest region.

Principal Findings

High Level, until relatively recently, was heavily dependent upon two primary industries, forestry, and oil and gas, which were dominant in the winter months. The recent construction of a major sawmill and the tendency towards year-round oil and gas activities have given the community a more secure base.

The most important development, however, has probably been the extent to which agricultural expansion is occurring in the High Level sub-region. This is serving to further balance the community's

seasonal activity patterns and broaden its ecomomic base. Improvements in air, rail and highway transportation facilities over the past decade have also added to the regional importance High Level. The Town appears to have reached a threshold which should ensure its continued growth as an administrative and service centre for a large part of northwestern Alberta. The Town's population could double in ten years.

Presently there are few job vacancies in High Level although a few positions are available for skilled tradespeople and mill operators. The number of unskilled and semi-skilled persons who are unemployed is large, but concentrated among native people and in outlying areas. Unemployment in High Level itself is low. Turnover among employees remains high. This is probably attributable to a number of factors: local living costs, inadequate recreational, school, health facilities and accommodations,etc. The opportunity to gradually introduce local persons into the vacancies could reduce turnover, and probably improve the social structure of the Town, which is considered to have a transient population. New jobs which will be generated in the Town may be concentrated in the service and administration sectors, which should benefit the female labour market particularly. Many of the jobs available to relatively unskilled males will probably continue to be found in seasonal positions.

A number of obstacles to growth are visible in High Level. These are:

(i) Lack of vocational/technical facilities oriented to the needs of area residents and which would avoid the dislocation problems inherent in sending students away for training. A proposed joint high school-vocational school now under discussion might ameliorate this problem.

(ii) Municipal financial constraints appear also to be holding back development within the Town proper. High Level suffers from a low assessment base and a high debt load, and is constrained in its ability to improve facilites and services. The Town cannot afford to get into land banking, reportedly because of the cost to purchase raw land from the Crown/A.H.C.

(iii) The lack of available accommodation and the cost of housing generally, including utilities and property taxes, appear to be major problems facing almost all employers surveyed. There is an inadequate supply of serviced lots in

Town for new construction. Major employers often provide accomodation (to the extent that they can get it) on a subsidized basis to attract and retain key employees. The lack of accommodation also discourages native peoples from taking jobs in Town.

Town of Fox Creek

Background

The Town of Fox Creek is located 160 miles northwest of Edmonton, and 115 miles southeast of Grande Prairie. The community has a present population of about 1,800 - this represents a growth of about 200 persons over two years; prior to 1976 the population had remained virtually constant for several years.

The Town's economy is heavily dominated by the oil and gas sector, but many of the employment positions are of a permanent nature, involving the operation and maintenance of existing gas plants and producing fields located nearby. Further exploration and development activities continue in the area and the Town acts as a service centre for the seasonal and transient flows of required men, materials, and services. There is little agricultural development in the area and forest-related industries employ only a few people in the Town's immediate surroundings.

The Town's commercial structure is a modest one, oriented towards the sale of lower-order convenience goods to a local market.

Principal Findings

Unemployment in the Town of Fox Creek is normally quite low; people generally are attracted to the Town to fill specific positions, and the smallness of the labour market, together with the virtual lack of a rental or resale housing market, discourages the unemployed from staying in Fox Creek. The housing situation results from the fact that 90% of the Town's permanent housing stock is owned by the major oil company employers who in turn rent accommodation to their staff at subsidized rates. Employees are not allowed to gain an equity position in this housing.

On the basis of present trends and developments the potential for Fox Creek to grow significantly in the short to medium term appears doubtful. A number of major resource projects are, however, under

consideration and could conceivably alter this projection. These projects are examined in more detail in the report itself, but are briefly summarized below:

(i) Fox Creek is only 16 miles west of the proposed Alaska gas pipeline, and it is possible the Town could serve as a construction base for the project. The long-term impact, however, would probably not be important;

(ii) Large coal deposits are located in the Fox Creek area, and these could someday be developed. The location of some of these deposits, however, might favour Whitecourt as a dormitory or service centre rather than Fox Creek.

Town of Peace River

Background

Peace River is located 300 miles northwest of Edmonton and is the major service and administrative centre for the Peace River area and the northwest part of the Province.

The most significant growth in population and demand for goods and services would seem to be originating in the far northern part of the Town's area of influence.

The Town of Peace River has little manufacturing industry but accomodates an important commercial structure which continues to grow. Labour force statistics for 1971 confirm the importance of the service sector, particularly wholesale and retail trade, public administration, health service, communications, and transportation and storage. Females account for 40% of the labour force, again reflecting the availability of service sector employment.

Principal Findings

In general, the medium-term prospects for Peace River suggest the Town's economic base will remain strong but with modest growth potential. New employment generation is not likely to be significant, but such that there is will be concentrated in those service and supply establishments catering to the regional market in northwest Alberta. Demand for labour in Peace River is not subject to the same degree of seasonality as in other northern resource communities but there is somewhat heavier activity during the summer construction season. Turnover is also not as

significant a factor in Peace River. The greatest labour demand is for skilled or experienced people, of course; demand for relatively unskilled people is generally of a low-paying seasonal nature and very inadequate in terms of available labour supply.

Town of Whitecourt

Background

Whitecourt is located 110 miles northwest of Edmonton and 175 miles southeast of Grande Prairie. The community functions as a major service centre for forestry activities in the Whitecourt Forest and for oil and gas exploration, development, operating and maintenance activities in a large area of west-central Alberta encompassing Slave Lake, Swan Hills, Fox Creek, Edson, Hinton, Grande Cache and Grande Prairie.

There is little agricultural activity in the area and hence a fairly small rural trading population from which to draw; for middle-order goods the town does serve to some extent as a service centre to communities such as Fox Creek, Blue Ridge, Peers and Mayerthorpe.

Census labour force statistics for 1971 indicate that two-thirds of total primary and secondary (manufacturing) employment in Whitecourt is associated with the petroleum industry, with the remaining one-third largely accounted for by wood manufacturing. Construction is also an important source of employment and this is probably attributable to the significance of the petroleum sector, and its requirements for the installation and maintenance of exploration and development facilities and support infrastructure. Until 1976/1977, most of the stimulus for the Town's growth originated in the petroleum industry, and particularly from oilfield service companies, which have established permanent work forces in Whitecourt to meet increasing exploration and development demands in that general region. In 1976, Simpson Timber Co. opened a new sawmill planer complex at Blue Ridge. Over the past two years, permanent employment has progressively increased to 259 and should now stabilize at about that figure. The operation of this plant, together with the necessary logging operations, has served to diversify and strengthen the economic base of the Whitecourt area.

Principal Findings

Over a 3-year time horizon, Whitecourt will likely continue to grow but at a more modest pace than has been experienced over the past two years. Additional employment growth will be concentrated in the commercial sector, government administration, and the oil field servicing industry. Turnover in the largest employment sectors - oil and gas field servicing and forest products - will offer the greatest opportunities for job-seekers. The potential developments in 1981 or thereabouts of a pulp mill and coal mine could go a long way to stabilizing and diversifying the economic base of Whitecourt and area. The pulp mill, particularly, would have a considerable employment impact. Assuming that Whitecourt serves as the domicile for one-half the employees at these two operations, the Town's population and labour force could increase by 50%. Without these two projects, the Town's longer term outlook for sustained growth is less assured, especially in light of the transiency of the oil field servicing sector, the lack of a substantial trading market, and the narrowness of its resource base.

Town of Edson

Background

The Town of Edson is located 125 miles west of Edmonton on the Yellowhead Highway (No.16).

Edson functions as a service centre to smaller communities within a 25-30 mile radius and to farmers in the Peers-Carrot Creek area. In total, this trading market has a population of about 1,000 and accounts for perhaps 10% of the Town's retail and service business.

The most important employment sector in the Edson area is the oil and gas industry. Gas plants and pipelines have been in operation nearby for some years and exploration and development activities in the general Edson area continue at a high level. With the promising results in the West Pembina field, located between Edson and Drayton Valley, and the tendency for activities to move farther west and northward, the industry will likely remain buoyant in the Edson area for some time. Edson also serves as an important communications and transportation centre in west-central Alberta.

The proximity of Edson to important oil and gas fields, combined with the mid-way location of the Town between Jasper and Edmonton on the busy Yellowhead Highway, both contribute to the importance of retail trade, accommodation and food services in the Town's economic base. Coal mining has recently taken on some significance to the Town, and is undoubtedly responsible for much of the recent climb in the Town's population. An important share of that employment is related directly or indirectly to the oil and gas sector. The impact of the Luscar-Sterco coal mine was only beginning to be felt when the last survey was undertaken in mid-1977.

Principal Findings

Employment and population growth in Edson had been very slow for the decade ending 1976. The expanded growth in the past two years has been due primarily to the new coal mine at Coal Valley and its related employment impact, together with some increases in employment in the traditional mainspring of the Town's economy - oil and gas. Edson will likely grow for another year at a farily rapid rate, until the direct and multiplier impacts of the coal project are fully absorbed. Beyond that, growth could again resume a slow rate. The region's forest products activities are largely concentrated at Hinton, and a majority of potential coal development are also more closely situated to that centre.

There is little agricultural hinterland to serve from Edson; farming activities only begin to appear on the eastern periphery of the Town's area of influence. Oil and gas employment appears to be levelling off particularly in respect to the permanently-based oil, gas and pipeline companies. A proposed coal development at Mercoal could, at some time in the future, give Edson a further boost if it were to be the primary domicile. Three hundred jubs could be generated directly and, considering the potential multiplier effect, the Town's population could jump by 1,200 or more. In the absence of significant growth opportunities in the primary and secondary sectors, however, commercial and tertiary sector employment has only modest scope for expansion.

STRATEGIC RECOMMENDATIONS

It was not the purpose of this study to give recommendations.

The following is a summary prepared by the
Northern Development Branch
of

Native Migration Patterns In and About Selected Northern Alberta Communities

Authored by MTB Consultants Ltd.
Edmonton, Alberta
June, 1978

Sponsored by The Northern Development Branch

PURPOSE

The purpose of this report is to provide support data for both the Opportunity Corps and the Employment Counselling and Relocation Services programs.

BACKGROUND

The programs the report is aimed at supporting are geared to aid in easing the transition of Native moving from low employment communities to communities where jobs are more readily available.

OBJECTIVES

The report's objective is concerned with the migration and travelling patterns of Native people in (i) Peace River, (ii)High Level-Rainbow Lake, and (iii) Edson, Whitecourt and Fox creek.

METHODOLOGY

Interviews were conducted with Native Outreach and Native Counselling service workers, and other sources within the government and the schools. Each of the three areas studied was dealt with individually.

PRINCIPAL FINDINGS

High Level - Rainbow Lake

The main flows of Natives into High Level are from the Fort Vermilion, Paddle Prairie, and Assumption areas. The most important reason for coming to High Level is to seek employment. Individuals also come to town to visit and seek medical attention. There is a minor flow of workers into Rainbow Lake from the Assumption area. However, due to the local oil and gas concerns hiring out of

the south, work in the area is highly seasonal. While employment possibilities do exist within the region, there are a variety of social barriers, including housing, skills, and lack of communication between Native workers and white employers, which hinder Native access to the work force.

Peace River Area

Migration into the Peace River area is predominantly from the Cadotte Lake area. The major factors spurring migration into the town are the deterioration of community life in some localities, visits to relatives in the correctional institute, and for medical attention. Many of those who do come to the Town of Peace River searching for work stay only a short time, probably due to the critical housing shortage.

A secondary movement was also noted within the region. In the past, a few families from the Whitefish Lake area settled around Nampa; as conditions at Whitefish Lake have deteriorated, more families have joined them.

With the impending Shell Oil in-situ development, a loss of Native families and a further deterioration of the social fabric of Cadotte Lake and Little Buffalo can be expected if no social impact planning is undertaken.

Edson, Whitecourt and Fox Creek

Native migration into Edson is minimal. Natives looking for work appear to bypass Edson for the Hinton area. This is probably due to the stability of the local work force and lack of jobs in Edson. The movement of Natives that does occurinto Edson is the result of commuting from the Marlboro Metis community to the west of the town site. The commuting is done to obtain educational and health services, as well as entertainment.

Whitecourt appears to be a centre for regional Native migration. This is due to Whitecourt's forestry employment opportunities, and the town's central location with regard to a number of Native communities. There is a steady migration into the town from a variety of locations; however, the dominant flow comes from the Valleyview area.

Once the Simpson Lumber Company in Blue Ridge and Fox Creek expand its interest into pulp and paper, migration into the Whitecourt region can be expected to increase. Although the Whitecourt area holds good possibilities for Native employment, the lack of housing restricts the ability of the Native worker to remain on the job.

STRATEGIC RECOMMENDATIONS

1. That the following towns be investigated further as sites for the Transitional Housing program: High Level, Peace River, and Whitecourt.

2. That attempts be made to encourage Native employee/employer communications.

3. That educational services on the reserves be upgraded so that Native children leaving the reserve are not at a disadvantage when entering a regional school. Group houses should be established for native students, so as to ease their transition from the reserve to the town.

4. That training and upgrading programs be situated in the major towns so that the programs oriented to migrating Natives can more effectively reach the target population.

5. That emergency houses be established in the major towns (especially Peace River) for those seeking services not found in their home communities.

The following is a summary prepared by the
Northern Development Branch
of

Economic Feasibility Analysis of Developing a Game Ranch on The Kikino-Caslan Metis Settlement

Authored by Richmond Livestock and Management
Consulting Co. Ltd.
Hinton, Alberta
September, 1978

Sponsored by The Northern Development Branch

PURPOSE

To study the economic feasibility of developing a game ranch for moose and bison on the Kikino-Caslan Metis Settlement.

BACKGROUND

This report follows up an earlier document by the same consultant which dealt with game ranching in general terms. In the early part of 1978, Mr. Gerry Lynch of the Fish and Wildlife Division (Alberta Recreation, Parks and Wildlife) conducted a preliminary evaluation of the Kikino-Caslan Settlement. His report reviewed baseline data and outlined those areas of the Settlement (which covers some 314 sections) considered most suitable for rearing moose and bison. The area chosen for a game ranching program by the Kikino-Caslan Metis Council lies in Tp62, R15, about six miles south of the Kikino townsite. Subsequent to completing a report on general aspects of game ranching, the Consultants focussed in on some of the specific factors that needed to be considered in a game ranching operation for the Metis Settlement. Biological and economic data were gathered and analyzed by computer simulation modelling, so as to answer the question of whether game ranching might be a logical supplement or alternative to existing land and resource uses. Because of the absence of factual data on game ranching in Alberta, the quality of the analysis was compromised to some extent by arbitrary inferences and assumptions.

FINDINGS

The concept of multiple specie game ranching has been practised in other countries in a variety of forms for several years. However, except for the reindeer program in the North West Territories and a few small private bison operations, there are no programs in Canada designed for the specific use of rearing indigenous animal species for either the local consumption and use of animal products by native peoples, fee hunting of private herds, or the commercial sale of meat and by-products.

One reason for game ranching not being pursued is that present regulations prohibit the commercial use of wild animals for food. In Alberta, bison are the only indigenous species which can be managed for commercial purposes, and then only south of the 22nd baseline. Further, it is clear that either permits or regulation changes would have to be introduced to allow Metis settlements the opportunity to charge outsiders for the right to hunt. If the Metis settlements are not allowed the opportunity to charge hunting fees, any game ranching enterprise will have to rely on bison as its economic base and relegate wild game to the role of a local food source. The economic analysis in this study assumed that moose could be harvested through fee hunting.

The first option considered was development of a full-scale game ranch using moose and bison as the primary species for both local consumption and commercial sale. Starting populations would number 49 bison and 32 moose (counting breeding females, bulls, calves and yearlings). Total development costs (including fencing of 12 square miles and provision of holding and handling facilities, buildings, equipment and access roads) were estimated at $217,299. Operating costs were calculated for items such as harvesting, veterinary costs, maintenance and depreciation, and feed (for bison only), but not for labour and management. Returns were based on the commercial value of both bison and moose meat. The economic analysis showed that total capital investment would be recaptured in the 15th year of operation, giving an average annual return of $15,400 to labour and management over the 20 year period.

The second option considered was development of 3 square miles for commercial production of bison, with the remainder of the 12 square miles left unfenced, but utilized for increased moose production through habitat improvement. Starting populations would number 49 bison and 18 moose. Total development costs (including fencing of 3 square miles and provision of holding and handling facilities, buildings, equipment and access roads) were estimated at $119,976. Operating costs and returns were calculated as before (although moose would be harvested by fee hunting in this option, returns were calculated on a meat value.) The economic analysis showed that total capital investment would be recovered in the 10th year, giving an average annual return of $10,000 to labour and management over the 20-year period.

Over the long term, then, game ranching may be an economically viable undertaking. The estimates suggest that there may be certain advantages in

developing the location for game ranching on a gradual basis. However, for native communities that can afford the activity, without concern for economics, investing in a game ranch for the benefit of future generations would be most commendable.

Because of the unlikelihood of game ranching producing anything more than trophy hunting and bison meat products, distribution is of minor concern. There seems to be an increasing demand for game products through hunting and especially for export. Two agencies in Alberta are currently registered for the processing of bison, one in Edmonton, the other in Calgary. As volumes increased, the Settlement might decide to continue using a central agency or to contract its own marketing.

RECOMMENDATIONS

Management will be one of the most important factors in the proposed program and should be incorporated under a buffalo association. This should comprise representatives from the Settlement Council, the cattle associations, the private farming sector, and those who live in the community but are not involved in agriculture. The association would work through the Settlement Council and could hire or appoint an individual to be responsible for the initial care and management of the program. Development of a game ranching program will require considerable assistance in the form of production and marketing expertise from government departments and private industry. Following formation of a governing association, complete with terms of reference and program objectives, work should begin immediately on:

(i) formalizing the land base;
(ii) defining and resolving the question of fee hunting on Settlement lands;
(iii) retaining assistance for initial layout; and
(iv) site development

POSTSCRIPT (based on an article in the Lac La Biche Post, February 24, 1981)

The Kikino Wildlife Ranching Association was formed late in 1978, and a series of attempts was made to get assistance in constructing the fence

necessary to hold buffalo, elk and moose. In the summer of 1980, the Settlement Council "took the bull by the horns" and went ahead with the project on their own. They financed the building of a large corral made of planks and a seven and a half foot fence around 20 acres of land. On February 20, 1981, a herd of 24 buffalo (comprising 4 bulls, 15 cows, and 5 calves) arrived at Kikino from Elk Island National Park.

The next stage of the project involves nine-gauge concrete reenforcing wire strung on posts (ranging from 6 to 10 inches in diameter) around more than half a section of land. Eventually, the fenced area will encompass nine sections. As well as holding the buffalo, the grazing area will have elk provided from Elk Island and moose trapped by gates along the fence.

Kikino Wildlife Ranching Association now has two men taking care of the buffalo. Advisers from the Fish and Wildlife Division (Alberta Energy & Natural Resources) and Alberta Agriculture continue to provide assistance. Their forecast is a good crop of calves in the spring (of 1981) with one or two bulls being culled in the fall.

The following is a summary prepared by the
Northern Development Branch
of

Smith: Assessment of Infrastructure,
Resource Base and Economic Development Potential

Authored by Hollinshead Lefrancois & Associates
Edmonton, Alberta
December, 1978

Sponsored by The Smith Development Association
with a grant from the Northern Development Branch

Background

Smith, an unincorporated hamlet with a current population of approximately 300 and a service area population of approximately 700, is located 110 air miles north of Edmonton. It lies halfway between Athabasca and Slave Lake and nine miles off highway #2. It has a beautiful physical setting in a forest area and is located on the south bank of a bend in the Athabasca River where the Lesser Slave River joins it.

For many years, the community relied upon a lumber mill as the major source of employment. At peak operation, up to 300 people worked there. In the summer of 1973, the mill closed permanently.

Naturally, this caused concern as to the future viability of the community. Through the efforts of concerned citizens, the Smith Development Association with eleven community-elected directors was formed. Besides serving a coordinating and facilitating function for development, this Association obtained a grant from the Northern Alberta Development Council for the purposes of commissioning a study.

Objectives

The main objective was to identify the potential and opportunities for developing the economic base, and make recommendations whereby these opportunities could be taken advantage of. This involved a review of the community development history, an analysis of the level of services currently available and the physical infrastructure, the development potential of the physical resource base, an identification of the human resource base, and resulting recommendations from the above.

Prinicpal Findings & Recommendations

Smith appears to be stable at its current population level. Very few people are voluntarily unemployed. As evidenced in the description of physical resource developments, the potential and planned projects should continue to provide enough contract work and employment for the community to keep its current population level and current standard of living. However, this stability is contingent upon existing major employers not relocating out of Smith. These employers are Joe's Oilfield Service, Alberta Transportation,

Alberta Forest Service, Northern Alberta Railways, the school, the general store, the bulk milk dealer, the hotel, and the service stations. It is also extremely important that no cuts be made in the level of services currently provided in the community.

Factors identified in the study as being necessary for community well-being and growth are:

1. New and Improved Road Networks.

These are required if Smith is to grow and attract people, businesses and transportation spillover -- particularly in relation to tourism and resource development. Improved roads are also needed by Smith residents who travel some distance to their place of employment, and school children who are presently spending over four hours a day riding school buses.

Priorities should be:

- A substantial upgrading of the road to the resort at the east end of Fawcett Lake.
- Obtaining government right-of-way and construction of a good quality all-weather road to the forestry campsite at the west end of Fawcett Lake.
- The completion of the road northeast of Smith to Orloff Lake, Rock Island Lake and linking up with the community of Calling Lake. This would provide a circle road for tourists, cross-country access to Calling Lake, and a potential link to Wabasca if a Calling Lake/ Wabasca road is built.
- The continuation of the road from the west end of Fawcett Lake to the Marten Hills and to the Slave Lake/Wabasca road. This would provide access to the Marten Hills and Wabasca without having to go through Slave Lake, and it would directly benefit residents and services working out of Smith in the Marten Hills oil and gas wells.
- Upgrading of the roads from Smith to Slave Lake and Smith to Athabasca. This would serve workers commuting to Mitsue and school bus children going to Athabasca.

2. Water Supply and Sewage Disposal

Alternatives to the current water supply and sewage disposal systems must be provided. The present situation of individual wells and flow fields is not acceptable and poses a very definite health hazard.

3. - High School Education -

Alternative high school education opportunities should be provided in order to remove the large drop-out incentive and provide area residents with educational opportunities that are equal to those in other areas.

4. - Low-Income Housing -

Opportunities to up-grade living accommodations must be provided. This should involve housing subsidies and a resolution to the ongoing problem of empty A.H.C. units.

5. - Co-ordination of Government Services -

Close attention should be given by government to assisting, facilitating and co-ordinating dialogue between the people of Smith and the many different jurisdictions of government.

6. - Business Development -

The Smith Development Association should seek government assistance in pursuing business development ideas that are shown to be feasible and in keeping with community preferences (e.g. regarding lifestyles). The most appropriate proposals will probably be found in recreation, however possibilities may exist in extended grazing lands and forestry-related projects. The recommendations of the Big Bend Integrated Management Plan should provide guidelines on this.

7. - Hamlet Clean-Up Campaign -

A clean-up campaign should be undertaken so as to make the appearance of the hamlet more compatible with its scenic location.

CONCLUSION

The community is a viable entity as it exists. However, certain actions are necessary to assure and improve on this viability. The new challenge -- that of maintaining and improving the quality of life through economic development -- will only be met as a result of a strong, well organized and well supported community effort. Through the concern and dedication demonstrated by the Smith Development Association, there is proof of a willingness to take up this challenge.

In the light of policies on decentralization and encouragement of rural development, it would appear appropriate for the provincial government to provide Smith with development assistance.

The following is a summary prepared by the
Northern Development Branch
of

Summary of Documentaion of Government Activity
and Spending in Four Northern Alberta Communities

Authored by The Northern Development Branch
Based on data submitted by Dt. W. Cecil Brown
Edmonton, Alberta
December, 1978

Sponsored by the Northern Development Branch

PURPOSE OF THE STUDY/BACKGROUND

In June of 1977, a Northern Communities Advisory Committee of Senior officials of four provincial government agencies was established. The purpose of this committee was to examine the major problems facing the development of Northern communities and to propose appropriate recommendations for implementation.

Departments represented in this study were: Municipal Affairs, Native Secretariat, Advanced Education and Manpower, and the Northern Development Branch of Business Development and Tourism (later Tourism and Small Business).

To assist this senior committee with its priorization of issues, a secondary working group was struck entitled the Northern Communities Analysis Committee Consisting of representatives of the same four departments. Its function was to study in depth some specific problems in northern communities, and then to recommend appropriate action to the senior advisory committee.

It was not long after its formation that this 'Analysis' group embarked on the study leading up to this particular report. The committee had been receiving feedback pertaining to government activity and spending in the remote or isolated communities/settlements located in the northern green zone. Reports of duplication of government programs, an ever increasing array of aircrafts chartered by public servants flying daily into such settlements, and inconsistent funding for programs within these communities were all partly responsible for the decision to proceed with some type of inquiry. Consequently, a study entitled 'Documentation of Government Activity and Spending in Northern Alberta' was commissioned August, 1977. The Northern Development Branch funded the project while the Department of Municipal Affairs provided the necessary office space and daily support services. Dr. Cecil Brown, was commissioned as the principal investigator of the study. His report was submitted in April, 1978. Because the consultant's report was, basically, 'documentation' as requested, considerable further analysis and summarization was done by Northern Development Staff during the period from May to October, 1978.

METHODOLOGY

Four settlements were selected in order to make the project manageable. They were Anzac, Wabasca-Desmarais, Chipewyan Lake, and Janvier. The Analysis Committee felt these settlements would provide a good cross-section of the different remote communities in the green zone.

A. What was Measured?

Provincial Departments were surveyed as to the following:

1. Total costs charged to each of the four communities. These costs would include capital expenditure, staff time, travel costs, program funding and grants.
2. Non-capital costs including everything except capital expenditures.
3. Capital expenditures.

The period measured covered three fiscal years; 1975-76, 1976-77, and 1977-78. As well, it became almost impossible to separate out the administrative costs from the other costs reported.

B. Difficulties in Preparing and Interpreting the Report

1. Departments were asked to separate administrative costs from service delivery costs. This turned out to be unrealistic for most of the departments.
2. Nine of the twenty-three reporting branches did not provide manday estimates for services.
3. While there was considerable information generated by the study, the quality and consistency of the information varied from department to department. Consequently, care had to be taken to identify the major trends which emerged from the findings.
4. Population figures for Northern communities which different departments utilize for their planning appear to be inconsistent.

PRINCIPAL FINDINGS

Readers are cautioned not to place too much importance on any particular statistic. Rather the suggested approach is to try to observe major trends and patterns. For this reason, the departments involved in the research felt it was very important to list the key findings in this short summary.

1. Non-capital costs appear to be increasing from year to year when all the four target communities are lumped together. For example, these costs increased 11% from 1975-76 to 1976-77, and a further 18% from 1976-77 to 1877-78. In terms of constant dollars, these increases are not as significant.
2. Increases in personnel related costs (administrative salaries, travel, subsistence) are the major factors in the non-capital cost increases when compared to project funding and grants.
3. It appears that in order to maintain the same service level (amount and degree of service) in the northern communities, it is requiring an increasing amount of government personnel.
4. It is possible that there is a tendency to 'focus' government attention on a particular northern community, resulting in a concentration of activities of several government departments in a particular year.

CONCLUSION AND STRATEGIC RECOMMENDATIONS

While it is difficult to draw conclusions from any one set of figures, the overall impact left with the Northern Communities Analysis Committee was that government activity and spending in remote communities are not as planned and coordinated as they could be. Wide variations in expenditure from year to year within and among communities raise questions as to whether all or only some of these communities are being given an equitable or adequate level of attention. Information at present is not readily available on an ongoing basis for effective management. To be able to assess this would require a general monitoring system which would establish what each community is receiving for what purpose. Even on a very general level such information would be of value. A monitoring system would also serve as a device to help improve Provincial Interdepartmental Coordination.

In the southern parts of the Province the municipal councils provide a means for identifying local needs, for establishing priorities, for coordinating the provision of many services, and a source of information for annual municipal expenditure.

In much of northern Alberta, the absence of an elected local representative body greatly increases the difficulty of identifying and coordinating local service provision. Emerging from this need for elected coordinating bodies, there remain several specific complementary measures which could be adopted:

a) a delineation of boundaries for all hamlets and settlements;
b) accelerated resolution of land tenure questions;
c) a periodic monitoring of larger hamlets to determine whether incorporation is feasible;
d) a consideration of new municipal structures in the cases of smaller settlements and hamlets similar to the Regional Rural Economic Development projects and the Regional Preventive Social Service agreements, both of which enable low population centres to join together in the pursuit of specific objectives;
e) the consideration of the augmentation or expansion of the role of the Improvement Districts Advisory Committees, so that they could serve a coordinating function, or as a clearing centre for activities within their region.

While the study does not identify all the problems associated with government spending and activity in isolated settlements, it does generally point to a need for more efficient planning, monitoring, and effective local government structures.

The following is a summary prepared by the
Northern Development Branch
of

A Preliminary Review of the Alberta Fur Trapping Industry

Authored by M.T.B. Consultants Ltd.
Edmonton, Alberta
April, 1979

Sponsored by the Northern Development Branch

Background

The production of wild furs played an integral role in the early economic development of the Province. For many Albertans, trapping was the only source of income until as late as the 1950's. Even though it still provides an important income supplement for several thousand people in the more remote regions of Alberta, trapping is now a forgotten activity for the average Albertan.

The production and sale of raw furs, however, represents but a small part of the total industry and its value to the economy. Industry specialists claim that the average pelt increases at least ten times in value between the trapper and the finished and retailed garment. Unfortunately, no processing of raw furs and very little manufacturing of garments takes place in Alberta -- at a considerable loss to the provincial economy. Before its potential may be realized, the industry as it exists in Alberta must be understood and its problems resolved.

Objectives & Methodology

This study represents one of the first steps in understanding the fur industry. It consists of a baseline description of its various components and participants, and some of their interactions. Available literature and other sources of information are compiled for use in a more detailed analysis. The consultants identify and discuss some of the problems which face the industry in the Province. A record is made of recommendations put forward by industry participants who were interviewed during the study. Finally, topics for future investigation are suggested as a way to gain a greater understanding of the industry and move toward the resolution of its problems.

The study methodology employed a literature search (leading to a bibliography of relevant materials) and interviews with several trappers, fur buyers, manufacturers and retailers, and Government personnel involved with the industry.

Principal Findings

There is one outstanding conclusion which colours all those to be presented. The fur industry, while appearing to be relatively simple in terms

of its organizational structure, is most complex when the linkages between its various components are considered. Only through the understanding of those interactions can a detailed strategy for the promotion and management of the fur industry in Alberta be derived.

The study indicates that Alberta accounted for 12.6 percent (by value), or approximately 2.5 million dollars, of the total Canadian production of raw furs in 1974/75. The 1978/79 harvest will probably net over 10 million dollars to some 7,000 trappers in the Province. At this time, the high foreign demand for raw fur, coupled with the sagging Canadian dollar, has inflated the prices received for raw fur to very high levels. However, individuals contacted during the study indicated that despite high prices, the fur resource in Alberta is under-harvested in many areas.

Both the cost of trapping and changes in age-distribution and lifestyle among native trappers have tended to reduce the level of trapping in remote areas. While this study attempts to uncover many of the factors which currently affect the primary producer, more detailed information on trapper attitudes will be required before strategies can be implemented to bring about a more complete use of the fur resource.

The report indicates that significantly more raw furs than are trapped in Alberta pass through the Province. There is a latent economic benefit from the high number of furs passing through which is not currently being realized by the Province. There are many reasons for this, with the chief among these being:

(a) Most of Alberta's (and those shipped through Alberta by other Provinces and Territories) furs are sold outside of the Province as unprocessed pelts.
(b) There are no active raw fur auctions in Alberta.
(c) There are no commercial processing (dressing) plants in Alberta.
(d) Manufacturers of fur garments are limited to a few, relatively small firms who work largely on custom orders. Most of the fur used in manufacturing is purchased from auctions or processors outside the Province or outside of Canada.
(e) Most of the many millions of dollars worth of retailed fur garments are purchased from manufacturers outside the Province.

(f) The lack of the facilities noted above precludes an expansion of the fur industry based on furs from the surrounding Provinces and Territories and the western United States.

There is a lack of precise data, both on the trapper and the manufacturing component, upon which to formulate a development strategy for the fur industry in Alberta. Therefore, further investigation should be made of the economic feasibility of establishing an integrated fur industry in Alberta. Of vital importance would be a parallel study of the ramifications such development would have for the primary producer. Among other things, this would investigate how trappers can gain easier access to the market place so as to increase the return on their effort.

STRATEGIC RECOMMENDATIONS

The consultants recommend that a detailed study of the fur industry be undertaken to assess the feasibility of establishing a viable fur industry in Alberta. Such a study should contain three major components:

(a) An in-depth study of the trapper and trapping. Emphasis here should be on the variables that affect trapper efficiency, especially among Native trappers.

(b) An in-depth study of the economic feasibility of establishing the manufacturing component of the fur industry in Alberta. Emphasis should be on understanding how the industry operates (i.e. make explicit the linkages which exist between the various sectors) and how and where Alberta can best carve a niche within this structure.

(c) A study of how economic growth in Alberta will impact socially and economically on the trapper.

The following is a summary prepared by the
Northern Development Branch
of

Task Force Report on Vocational Education in
Improvement District No. 23

Authored by Task Force on Vocational Education
High Level, Alberta
April, 1979

Sponsored by Northern Alberta Development Council

PURPOSE AND BACKGROUND

The study was undertaken to determine the academic and vocational needs in I.D. 23, and to prepare a proposal to meet the identified needs. Direction for the study (and the creation of the task force) came at a public meeting in June, 1978 at which area residents presented reasons for an improved delivery of vocational education. At a November, 1978 regional education conference the task force was encouraged to follow a two-phase review: (1) a plan to upgrade present facilities and programs at the junior and senior high school levels, and (2) a plan to develop a comprehensive regional education facility, based on updated research data.

OBJECTIVES AND METHODOLOGY

The study proposed:

1. to examine regional economic indicators.
2. To examine existing education programs and facilities.
3. To determine present and future vocational education needs.
4. To determine a proposal for new programs and facilities.
5. To make recommendations.

Relevant statistical information was gathered and studied extensively. Following the November conferences the Task Force held similar meetings in various communities.

Two consultants were hired to help with the research and compile the report. As part of this process, a group of students from the Community Development Department of the University of Alberta helped to prepare an interview questionnaire and conduct the interviews in each community. The Task Force selected a non-probability sampling procedure called "purposive sampling". In this way, it was assumed that it is assumed that the people selected for interviewing in each community would represent the "general feeling" of the community.

PRINCIPAL FINDINGS

I.D. 23 is a resource-rich sector of the province experiencing increasing growth in oil and gas production, in forestry resources production, and in agricultural production. Noteable indicators are:

1. Agriculture:
   - from 1971 - 76 the total number of farms increased 60%,
   - from 1971 - 76 the average size of farms increased 3.4%,
   - from 1973 - 77 the value of farmland increased 135%.
2. Forestry:
   - sawmill/planer operations produce 100 million bft. of lumber annually (20% of the provincial total),
   - forest fire is considerable; the re-generation cycle is 100 years,
   - the forestry industry employs 300 full-time workers for sawmill/planers and 300 full-time for winter logging operations,
   - there is potential for expanded forestry manufacturing operations, e.g. pulp and paper.
3. Oil and Gas:
   - oil production royalties are approximately $20 million annually,
   - oil production is approximately 3.8 million bbl. monthly (9.3% of the provincial total),
   - gas production is 3.5 billion cu. ft. monthly (1.3% of the provincial total),

- I.D. 23 has approximately 11% of Alberta's conventional oil reserves and 2% of Alberta's natural gas reserves,
- cost of oil and gas recovery is lower than elsewhere in the province.

4. Service Industry:
- essential to the primary and secondary industries due to the distance from major supply centres,
- there is a general lack of financing, housing, commercial space and qualified/ trained personnel.

5. Transportation:
- High Level is a junction for two primary highways,
- there is scheduled air service to High Level and Rainbow Lake,
- the communities in I.D. 23 are distant from each other.

6. Ethnic Groups:

There are four major groups:
- Treaty Indians on Reserves,
- Mennonites who reside mainly in the La Crete area,
- Metis scattered throughout the region,
- European descendents scattered throughout the region.

7. Population:
- regional average increase for period 1971 - 76 was 38%,
- the corresponding increase in High Level and Rainbow Lake was 10%,
- the corresponding increase on the Indian Reserves was 6%.

The study identified:

1. Five major "regional planning factors":
   - High Level is the region's transportation and service (including grain handling) centre,
   - Fort Vermilion is the agricultural centre,
   - La Crete has the greatest population growth and the greatest growth in agriculture,
   - Rainbow Lake is the oil and gas centre in the region,
   - Assumption is the administrative centre for the Dene Tha' Indian Band; there are also exceptionally good school facilities.
2. Three "general problems of the region":
   - lack of skilled labour,
   - high turn-over among skilled personnel,
   - high cost of servicing.
3. Five "present needs" and one "future need":
   - community-determined vocational or business education,
   - community-determined expanded or newly created, specific programs of instruction,
   - interagency and intercommunity co-operation,
   - special interest recreation and education programs,
   - permanent adult education opportunities provided by Alberta Advanced Education and Manpower in a central community,
   - centrally located training centre developed once all communities have reached the limit in their ability to provide adequate training.

STRATEGIC RECOMMENDATIONS

In keeping with a community-based process for vocational education development in the region the first seven recommendations are directed to I.D. 23 communities:

1. Develop local objectives.
2. Explore the possibilities of a co-operative effort with surrounding communities.
3. Make maximum use of existing facilities.
4. Make maximum use of volunteer leadership.
5. Expand the programs and events offered to the community.
6. Explore all possible sources of financial and leadership assistance.
7. Prepare a long-range plan.

RECOMMENDATIONS TO GOVERNMENTS ARE:

1. That four levels of government (inc. school boards) develop strategies for co-operation in implementing programs requested by people of I.D. 23.
2. That government develop and guarantee a standard of basic community services.
3. That legislation be enacted to allow the delivery of vocational education to students as young as 13 years.
4. That Alberta Education modify its present regulations to allow smaller schools to offer programs in Home Economics and Industrial Arts.

RECOMMENDATIONS TO ALBERTA ADVANCED EDUCATION AND MANPOWER ARE:

1. That the Department establish permanent upgrading and vocational programs to serve I.D. 23 and that these programs have adequate financial support.
2. That the Department co-operate with the Fort Vermilion School Division and all Community recreation boards in in order to maximize the use of facilities and human resources. The community school concept is suggested.
3. That the Department co-operate with regional industries in order to identify and deliver training programs relevant to the region's manpower needs.

The following is a summary prepared by the
Northern Development Branch
of

An Overview of the Market Potential for
Poplar Lumber in the U.S.A. and Canada

Authored by B.G. Project Development Associates Ltd.
Edmonton, Alberta
May, 1979

Sponsored by the Smoky River Regional Economic Development Board
with a grant from the Northern Development Branch

PURPOSE

The Smoky River Regional Economic Development Board became interested in the potential for development of the poplar resource as a means of fostering new economic development opportunities. This study was commissioned by the Board to provide an overview of the market for 4x4 poplar lumber.

The overall objective of the study was to determine if there exists a market which might be supplied by a mill situated in the Board's area. Should this prove to be the case, further work could be done to prepare more detailed cost estimates and overall project feasibility.

BACKGROUND

To determine the market possibilities for poplar is a difficult task, but to separate this market into segments by size is practically impossible without an extensive survey of end-user firms. In fact, many end-users are not concerned whether they purchase 4x4, 5x4 or 6x4 stock. Their objective is to get a high quality, reliable product. Since any new mill could produce various dimensions with the same equipment, the focus of the study was to define the total market for which poplar lumber could find application. The study therefore proceeded to develop regional market estimates in both Canada and the U.S. as well as the total potential market for poplar lumber in all dimensions.

Poplar production is directly related to the building cycle. The annual amount of poplar produced in Alberta between 1973 and 1977 reflected a downturn in this cycle (following the peak market of the decade in 1973) and the subsequent closing of the stud plant in Slave Lake. Provincial production according to the Alberta Forest Service was:

1973	19.7 million board feet
1974	11.1 million board feet
1975	12.2 million board feet
1976	5.6 million board feet
1977	6.7 million board feet

Statistics Canada figures cover only the larger poplar mills. But, even when adjustments are made for small mills, it is clear that volumes are very small relative to total hardwood production. In 1976, poplar ranked third after maple and yellow birch.

In Alberta, poplar has played an important role in the plywood industry. However, when the stud mill was operating at Slave Lake, the emphasis shifted to lumber production. Exports of poplar lumber have been an insignificant component in the total movement of hardwood lumber to the export market. Unlike total hardwood lumber sales,which are evenly divided between exports to the U.S. and the E.E.C, almost all of Canada's poplar exports are shipped to the U.S. The end-uses of these poplar exports are: blanks & blocks; lath; turning stock; match splints; handles, grips and backs; boxes and containers; doors; door and window frames; and spoolwood. Many of these specialty products are used as inputs to other manufacturing plants such as the furniture industry. In many industries, poplar can act as an economical substitute for other species.

METHODOLOGY

Demand estimates for poplar lumber were based on considerations of the total value of production for the end-use industries selected. The technique was:

(i) to determine the total value of each industry;
(ii) to determine the total wood value used by each industry;
(iii) to estimate the maximum possible market; and
(iv) to assess the possible use of poplar in the total wood consumption of each industry.

Estimates were based on information taken from other studies, from discussions with industry personnel,and from estimates made by the consultant.

The use of poplar lumber is determined not only by its physical properties but by such factors as price, quality control, and delivery scheduling. Therefore, the degree to which the species can be used is a direct function

of production experience. As such, the ultimate demand for poplar will vary depending on the interplay of all these factors. However, figures provided using the above-mentioned technique do serve as conservative estimates of the potential penetration of poplar lumber.

PRINCIPAL FINDINGS

From the point of view of Alberta poplar producers, a number of market areas are beyond their reach. This is the case with the North East and North Central areas of the U.S., where Albertan producers face stiff competition from producers in the South U.S. as well as Ontario and Quebec. Most of the Southern region of the U.S. cannot be supplied economically by Alberta. This leaves primarily the Mountain and Pacific regions for developing a marketing strategy.

Canadian end-use markets are highly concentrated in Ontario and Quebec. In the millwork industry, Ontario and Quebec accounted for 33 percent and 28 percent respectively of potential demand in 1976. For the household furniture industry, Ontario accounted for 50 percent and Quebec for 40 percent of the total. In viewing the potential for an Alberta plant, it should be remembered that large areas of poplar are present from Quebec to British Columbia. Demand for poplar throughout this area will probably be met from within each province.

The market potential for Alberta poplar can be summarized regionally as follows:

Alberta	$5.2 million	26 million board feet
British Columbia	$5.2 million	26 million board feet
Saskatchewan	"Minor Market"	
U.S.	$557 million	2.3 billion board feet

Given an acceptable lumber quality, very large markets exist in the U.S. for Alberta poplar. However, western Canadian markets could absorb much of the lower grade material produced in Alberta.

Variables studied in order to assess the real market possibilities

of Alberta poplar are:

- o price/cost relationships
  - market price for each grade in each regional market
  - estimate of transportation costs for each market
  - mill net price for each grade (which an operator receives at his sawmill)
  - cost of logs landed at the mill yard
  - estimate of sawing, planing and drying costs
  - estimate of the lumber recovery factor
- o price structure
  - difficult to determine because of the limited volumes which move into the open market
  - available figures show considerable differences in price between regions
- o distribution patterns
  - through specialty wood brokers and/or warehousing operations, by direct sales, or through regular retail lumber outlets
- o mill net returns

CONCLUSIONS & RECOMMENDATIONS

Following the completion of estimates on sawmill profitability, the consultants reached certain conclusions. From a marketing point of view, it appears that there are sufficient markets to warrant a poplar mill, at prices which would seem to offer a positive return. However, further analysis on production costs should be undertaken to confirm the cost of production factors. It is likely that the Pacific (California) market area would provide the best outlet for poplar production from Alberta. Alberta itself would provide a market sufficient to absorb the production of lower grade material. Among the desirable characteristics of a new poplar mill would be quality control and delivery reliability; a range of dimensions in addition to 4x4; good quality logs for input to the mill; and disposal of waste fibre as chips or round-wood sales. A feasibility analysis should be conducted of a combined lumber-cut stock facility.

The following is a summary prepared by the
Northern Development Branch
of

A Study of Municipal Infrastructure With
Reference to Northern Alberta

Authored by Peter C. Nichols & Associates Ltd.
Edmonton, Alberta
June, 1979

Sponsored by the Northern Development Branch

PURPOSE

This report reviews the provision of municipal infrastructure and services to smaller communities in northern Alberta, examines present standards governing minimal levels of service, and assesses implications of this analysis in terms of project and program development.

OBJECTIVES

The document begins with a brief overview of the benefits, delivery mechanisms and jurisdictions, and standards relating to various municipal services and infrastructure components, with particular reference to smaller communites in northern Alberta. In Chapter 3, a profile of municipal infrastrucutre and services in northern communities is included, largely on the basis of a reorganization of existing information. The financial capacity of small communities is explored to some degree in Chapter 4; and, for illustrative purposes, one Improvement District was selected and its patterns of intramunicipal financial transfers and distributive characteristics examined. Chapter 5 provides order of magnitude cost estimates for a number of infrastructure components, including water and sewer facilities, fire equipment, and recreation facilities. The concluding Chapter summarizes findings and discusses in a general way the nature of work activities which should follow if a program to upgrade municipal infrastructure facilities is to be properly implemented.

METHODOLOGY

According to the terms of reference, the data base to be used for the study was that contained in the NADC document "Inventory of Infrastructure for Selected Northern Communities". A list was compiled of northern communities by population category, type of region (agriculture and non-agriculture), and incorporation status. Inventory data regarding water and sewer services, road access, solid waste disposal, protective and health services, and recreation facilities were summarized for each

have a more adverse impact in the more undeveloped and remote spots of the North. Centralization exacerbates the already poorer access to services of remote centres.

(iv) Local Financial Base. Whether a community is incorporated or not, local expenditures and service levels are generally related to the size of the local financial base. That, in turn, is often relatively low in the more remote settlements in the non-agricultural north because of: the absence of land tenure; the proportion of government and institutional property on which neither tax nor grants-in-lieu of tax is paid; the lack of a local commercial and industrial base, which may be located in incorporated centres or elsewhere in the municipality; and the relatively poor housing and property conditions. Lower income levels in such communities also act to limit the level of services that can be self-supported.

(v) Socio-economic Conditions. Aside from generally lower employment and income levels in more remote settlements of the north, exposure to communications and educational achievement are also less advanced. Consequently, local residents - many of whom are natives - may be less informed as to alternative levels and standards of service available to them and the benefits related to those alternatives. Because the delivery mechanism is more responsive to interest, demands, and concerns expressed at a local level, an apparent apathy or lack of involvement may act as a disincentive to the provision of improved services in a community.

(vi) Institutional Development. It has been found in many parts of the world that fiscal policies work against those less well organized and less vociferous in expressing their wants and needs. This is probably no less so in undeveloped and remote parts of the Province. Local institutional development normally implies a greater level of local involvement in examining and selecting from alternative programs and projects, in design and construction, and in seeing that they are properly developed and implemented to meet local requirements. There are doubtless many reasons why institutional and organizational development in many of these smaller centres is inadequate, but local control and self-reliance will often foster this development. The present structure of public administration, particularly in the

Improvement Districts, probably discourages local institutional development. In the I.D.'s, a greater number of sector agencies are involved in providing services autonomously and the main administrative responsibilities are provided by the Provincial I.D. Administration. This constitutes a fairly high degree of centralized as opposed to local and decentralized control. A greater devolution of authority and control could assist in local institutional development and, by that means, increase the level of personal involvement in local settlements and communities.

Reference is also made to the following table which summarizes some of the factors contributing to poorer levels of service in smaller, northern communities:

Service/Facility	Factors
Police	- dispersed communities; poor transportation access; sparsely settled region - detachments being centralized in larger centres
Fire	- diseconomies of small scale - general absence of adequate water supply - lack of opportunities to joint-share facilities - local financial capacity - level of education; institutional development; local interest
Roads	- local financial capacity and contributions - small population, isolation, geography, contribute to high costs, poorer economic justification
Recreation	- no vocalization of wants, needs - lack of opportunity to joint-share facilities - local financial capacity and contribution - institutional development; local interest, no vocalization of wants and needs
Solid Waste	- isolation and inaccessibility - diseconomies of small scale
Water	- poor groundwater supplies - diseconomies of small scale - local financial capacity and contribution - housing and development conditions - institutional development lacking; educational levels; no vocalization of wants and needs - isolation, climate, access, absence of skilled local labor force escalates costs
Sewer	- as above - absence of municipal water systems

STRATEGIC RECOMMENDATIONS

The identification and development of municipal infrastructure projects in northern unincorporated communities appear to be occurring now in a relatively unco-ordinated and undisciplined fashion. It is recommended that attention be focused on instigating a framework within which such projects can be prepared in the future. A skeleton of the research and management activities which appear to be necessary is outlined below:

1. Define Sector Program and Objectives - It is important to properly define the scope of activities and the main objectives for the program in order to prepare terms of reference for future work.

2. Develop Institutional or Organizational Framework - It is critical that the implementation and organizational network be developed if the program is to be a successful one. Agency responsibilities must be defined, a means of inter-agency coordination and cooperation determined, and the appropriate form of local participation assessed.

3. Policies/Procedures - An operational document or set of guidelines should be prepared to further delineate terms of reference.

4. Priorities/Selection of Sub-Projects - However large the commitment is to the improvement of municipal infrastructure and services in the north, it is likely that financial resources available will be short of the need. Decisions will therefore have to be made in the order in which individual sub-projects will be executed. Within the overall framework and program objectives, sub-projects should ideally be so ranked that they maximize the net social and economic benefits per unit of investment. Program administrators should be flexible in applying criteria. Careful monitoring is essential, particularly in the initial stages, to test the soundness of the approaches being used and to identify problems so that changes can be made if necessary.

The following is a summary prepared by the
Northern Development Branch
of

An Evaluation of the Northern Alberta Development Council Student Bursary Program

Authored by Carcajou Research Ltd.
Edmonton, Alberta
June, 1979

Sponsored by the Northern Development Branch

PURPOSE/BACKGROUND

The purpose of this evaluation was to judge the success of the Northern Alberta Development Council Student Bursary Program in meeting its short-term and long-term objectives; to identify any shortcomings; to assess its contribution to the supply of teachers in northern Alberta, its usefulness to Native students, and its influence on students' occupation decisions; and to recommend improvements in policies, guidelines, and administration.

The information was drawn from written records, interviews (most of them by telephone) with past and present recipients of awards, and with interviews with people who have observed the Program in operation.

OBJECTIVES

The objective of this study was to indicate how successful the Program has been in meeting its long-term and short-term objectives. Although the Program has not been in place long enough to measure any long-run effects, several recommendations were made on both long-term and short-term objectives.

FINDINGS

Program Policies

- Objectives

RESEARCH QUESTION: How successful has the Program been in meeting its long-term and short-term objectives?

The Program has had two objectives: to increase the number of students from northern Alberta who can participate in post-secondary education (the participation objective): and to increase the supply of trained professionals in northern Alberta (the professionals-in-the-north objectives). These are not perfectly compatible, since the first would stress northern residence and financial need, and the second would stress professional competence and interest in the North. The Program has tried to keep them equally balanced.

In the five years since 1974-1975, 676 awards have been offered totalling $1,283,000. Average awards have increased by an average of 5.2% per year, from $2,000 to $2,450. Of 357 recipients identified, 37% are still receiving awards, 32% have completed or are completing their work obligations, 12% have deferred their work obligations, and 19% are repaying their awards, have defaulted, or have unknown status.

These are short-run conclusions. The Program has not been in place long enough to measure long-run effects. The only clue is that 83% of those who have completed their work obligations and were contacted by the consultants were still in northern Alberta, and 75% of those said they planned to stay.

The reasons for the low rate of return to the North seem to lie in certain shortcomings in the Program; an inadequate system of publicity and information; poor follow-up with students; and obsolete methods of record-keeping. These shortcomings seem to be directly traceable to understaffing (the only staff mamber is a part-time secretary) and to turn-over among secretaries. The consultant also found that the repayment system (repayment is required if a student does not go north) encourages people to accept awards even if they have little or no intention of going north.

• Occupational Priorities

RESEARCH QUESTION: How successful has the program been in securing more educational personnel, particularly teachers, for the North?

RESEARCH QUESTION: How successful has the Program been in encouraging students to follow the occupations required by northern communities?

Teachers have received by far the largest share of support from the Program, and have been the most successful respondents to it. 53% of award-holders have been training to be teachers, and 70% of those who completed their training have gone to northern Alberta. (This compares with 57% for all occupations.) Seventy-four teachers have gone north after receiving Program Assistance.

The much poorer results for other occupations perhaps reflect the characteristics of the northern labour market, and the forecasting methods of the Selection Committee which have been highly informal. The results have not been made available at a time, or in a form, that would influence the decisions of students about occupational choices.

• Policy Towards Native Students

RESEARCH QUESTION: How useful has the Program been to Native Students in Northern Alberta?

Native students do not necessarily identify themselves, and thus no accurate count can be made. The consultant received two indications that were considered to be very useful. 1) Almost all Native students interviewed said that they would not have been able to undertake their studies without the Program's help. 2) All spokesmen for Native students applauded the principle of the Program, and wanted it further extended.

The Program has been biased in favour of Native students, but has not been exclusively for their use. Many Native spokesmen thought the Program should be made Province-wide for Native students, and some thought it should be exclusive.

Program Delivery

- Agencies, Responsibilities and Staffing

All Program delivery has been the responsibility of the Students Finance Board. Selection decisions, and control of work obligations and other policy implementation, have been in the hands of a Selection Committee with representation from the Students Finance Board (1 member), the Northern Alberta Development Council (4 members), the Metis Association of Alberta and the Department of Advanced Education and Manpower (1 member each). The only staff member has been a part-time secretary with broad responsibilities for administration, record-keeping, publicity and follow-up.

- The Program's Annual Cycle

Most activity in the Program has taken place in the Spring, when publicity is made up and distributed, and in the Summer, when application forms are received and processed. Routine administration has taken place throughout the year. A more natural cycle is an annual one, with a greater amount of activity more or less evenly spread over the year.

- Record-Keeping and the Mechanics of Selection

All record-keeping, correspondence and administration is now done using manual methods. Computers and word processing machines would have many advantages.

Looking at the participation objective, the consultant found evidence that the Program has assisted at least 357 students with total awards ranging from $1,250 to $16,000. A significant number of those contacted said that they could not have undertaken post-secondary studies without this assistance or could have done so only with great hardship. Only one of the 30 rejected applicants contacted said that rejection had forced him to change his plans. The Program appears to be having an effect on participation in post-secondary education, but measures are lacking of its magnitude in relation to the total problems. For example, poor publicity may mean that some worthy students are not aware of the Program or are not applying because of misunderstandings about the Selection Committee's policies.

Looking at the Professionals-in-the-north objective, we found that 113 recipients have returned to northern Alberta to complete their work obligations (Table 1). Of recipients who should have returned, 67 did not, and are either repaying their awards, are considered to be in default, or are appealing their obligations. The consultant concluded therefore, that the Program is having an effect on the number of professionals in the North, but one that is not as great as it could or should be.

Table 1: Occupations of Recipients Completing or With Completed Work Obligations

	Work Obligation		
Occupation	Incomplete	Complete	Total
Education	39	35	74
Nursing and Similar Trades	4	3	7
Business	-	8	8
Engineering, Forestry, etc.	3	7	10
Animal Health	1	2	3
Dentists	2	1	3
Doctors	2	-	2
Social Service	2	1	3
Other	2	1	3
TOTAL	55	58	113

Deferments and Repayment of Awards

8) That deferments of work obligations continue to be granted in order to allow students or their spouses time to finish their programs, or to find a job in northern Alberta, if that has been shown to be difficult for the student.

9) That repayment terms be stiffened by calculating the debt as if interest (at least at the student loan rates, preferably at commercial rates) had been charged from the date of payment, and by shortening repayment periods so that the minimum monthly payment is $100.

Occupational Priorities

10) That a formal survey of market opportunities for graduates of different courses be undertaken annually, that the Selection Committee use this material to set quotas on courses, and that results be publicized in time for students to make decisions.

Selection: Criteria and Process

11) That the Selection Committee rephrase the policy towards first year students. The policy should say that such students will be given lower priority, but that decisions on their applications will be taken after due consideration of their financial situation, presentation, plans and maturity.

12) That financial need not be an absolute criterion, but be used to rank students in competitive situations, along with other ranking criteria. A student who shows interest in the North and who is training for a high-priority occupation should be eligible for support regardless of need.

13) That the Selection Committee's policy of giving higher priority to northern students be retained and frankly stated, but that southern students continue not to be completely excluded.

14) That the selection process be re-organized to ensure the committee's continued importance, and that a sequential procedure be adopted that applies objective criteria first (especially occupational quotas and divisions between high priority, acceptable and unacceptable courses) and judgemental ones later. Course quotas should be tailored to the market and the total budget.

STRATEGIC RECOMMENDATIONS

PROGRAM POLICIES

Objectives

1) That the two objectives, (a) to encourage northern participation in post-secondary education, and (b) to increase the supply of professionals in northern Alberta continue to be given equal weight, and that all sources of bias towards one objective or the other should be neutralized.

Total Budget & Amounts of Awards

2) That the maximum award amounts be increased by approximately equal percentage amounts, to get new rates of $3,500 for single students and $5,600 for students with dependents.

3) That maximum rates be adjustable annually by agreement of the two directly-concerned Ministers and the Provincial Treasurer, instead of being set by Cabinet.

4) That the budget ceiling of $400,000 be increased as soon as it is reached, and that the ceiling then be increased annually along with the maximum rates.

5) That increased awards be made available, in return for increased work obligations, for certain special cases: students with more than two dependents, and students who wish to continue their studies in the Spring and Summer.

Work Obligation Policy

6) That a system be adopted whereby work obligation times can be shortened in return for work in the severely isolated areas of northern Alberta, but that no part of northern Alberta be excluded from the work obligation area.

7) That the work obligation policy continue to insist on work inside the area defined as northern Alberta.

Policy Toward Native Students

15) That the Program continue to give priority to Native students and continue to make extra efforts to respond to their special needs, but that it also continue to be oriented towards the North as a whole. The N.A.D.C. should support any efforts to set up a parallel program serving Native students in southern Alberta.

Advance Decisions

16) That the Selection Committee make provision for advance decisions in May of each year, to accommodate students who need to have an early reply.

Appeals

17) (a) That no formal process for appealing selections be instituted but that an annual audit of selection decisions be made by the Student Finance Board; (b) That appeals of Committee decisions concerning work obligations be made to the Students Finance Board.

PROGRAM DELIVERY

Agencies, Responsibilities and Staffing

18) (a) That the composition and functions of the Selection Committee remain as they are; (b) That the secretary be responsible for minutes, record-keeping and other purely administrative functions; (c) That an awards officer be attached to the Northern Development Branch to be responsible for information and publicity, personal contact with students, personal follow-up, and selling of the Program and northern Alberta to students.

The Programs Annual Cycle

19) That the annual process of preparation for selections begin in September with the labour market survey. That the selection strategy be set in December and outlined in publicity material sent out beginning in January. That advance selections be made in May and the remainder in July. That personal contact with students take place all during the academic year and be intensified as

graduating students are looking for jobs. That contact be made during the year with all students working on their obligations. That some method, perhaps a Program newsletter, be adopted for keeping in touch with recipients of awards after they leave the Program.

Record-keeping and the Mechanics of Selection

20) That all records be stored on computer, and that full use of modern automated systems be made for routing correspondence and to support the selection process. If the cost of this for the northern Program alone is prohibitive, the feasibility of tying all Students Finance Board programs into such a system should be investigated.

The following is a summary prepared by the
Northern Development Branch
of

Dunvegan Hydro-Electricity Development Project: Summary and Overview

Authored by the Northern Development Branch
Peace River, Alberta
July, 1979

Sponsored by the Northern Alberta Development Council

BACKGROUND

In August, 1974, the Alberta Government authorized a feasibility study of the Dunvegan site for hydro power development. The site is located approximately two miles upstream from the Highway No. 2 suspension bridge at Dunvegan. Three alternative development heights were studied. "Low" Dunvegan would require flooding of the Peace River valley up to the Alberta/British Columbia boundary. "Intermediate" Dunvegan would create a reservoir back into B.C. to a point where the Peace is joined by the Moberly River (Site C). "High" Dunvegan would increase water back-up to the G.M. Shrum Power Plant near the W.A.C. Bennett Dam in British Columbia.

The feasibility study (Alberta Hydro Committee, Feasibility Study: Dunvegan Hydro Power Site, 1977) concluded that the project was technically sound and economically feasible (in comparison with thermal power sources) for all three dam heights studied. However, it warned of the potential extensive flooding problems in B.C. which would result from the High Dunvegan alternative. The authors also expressed caution regarding the Intermediate Dunvegan, because of the lack of apparent advantages which would accrue to British Columbia in pursuing this option jointly with Alberta.

PURPOSE

In view of this background, the Northern Alberta Development Council requested the Northern Development Branch to prepare a summary and overview of all available information pertaining to the Low Dunvegan hydro project.

FINDINGS

(1) Costs

Cost estimates are available according to different in-service dates, the number of electricity generation turbines and the timing of their installation. A total of eight turbines are planned for the low-head dam, and in-service dates for individual turbines have been varied to permit analysis

of different sequences. Two low-head sequences appear to be the most cost-efficient: 77I and 77L2, with in-service dates of 1992 and 1995 respectively.

Estimates of plant construction and operating costs for Low Dunvegan (calculated by Acres Consulting Services) range from $622.7 million to $779.6 million over the 70-year life span. Because of construction costs for the dam and generating plants, most of the expenditures would occur prior to the date of electricity generation.

The Low Dunvegan project proves to be more costly in initial capital costs than the production of an equal amount of electricity through coal-fired turbines. However, when costs are discounted over the life of the projects, Low Dunvegan appears more economical. It is not certain how costs would differ from these estimates if problems were experienced with water flows or ice restrictions. On the other hand, there is relatively little stability in the long-term costing of coal (in terms of recoverability of reserves, increasing costs of energy substitutes, and sociological and environmental concerns regarding coal production).

(2) Social Impacts

Employment would average 759 workers declining to 602 workers at peak periods between year #4 and year #9 of project implementation. The majority of these are expected to be construction workers, since only 30 permanent positions will be created. "Boom-town" social problems may occur during construction with respect to housing and the provision of services to a mainly transient, young male work force.

Suggestions for amelioration or improvement include: the use of construction camps near the site; spreading the effects among various centres; and counselling local businesses against over-expansion.

If a number of the new arrivals settled in the area, a potential would exist for long-term positive impacts from the dam construction.

(3) Recreation

Land-based recreational activities will decrease slightly through the loss of land, while water-based activities may be enhanced because of the reservoir. However, some recreational activities like swimming and boating, as well as the preservation of the important Dunvegan historic site (and other archeological and historic sites) would depend on the regulation by government of water levels.

A recreational use for the dam is favoured over flood control, which would involve greater fluctuations in water levels and would seriously reduce the amount of energy to be extracted.

(4) Environmental Concerns

There are expected to be some negative environmental impacts. Fish conditions are considered poor because of inadequate plankton, due to low levels of light penetration. Special measures should be taken during construction and filling so as to avoid further deterioration of the fish habitat.

The most serious impact appears to be the effect on the wildlife populations of moose, deer, other large carnivores, small mammals, furbearers, birds, and game birds which may be displaced by flooding. Survivors would have difficulty competing in the remaining marginal habitat areas with other uses such as farming and cattle grazing.

CONCLUSIONS

(1) Industrial Development

A decision in favour of hydro-electric development at Dunvegan is related to the overall economic development of northern Alberta. Abundant electricity helps to create an infrastructure for further industrial development, resource development, and for improving the quality of life in the Peace River Region.

(2) Timing

In order to avoid the end of the construction phase leading to an economic down-turn, other major projects should be planned in the region during periods of slack economic activity.

(3) Renewable Versus Non-Renewable Resources

The costs of the coal alternative involve the depletion of a non-renewable resource which must be balanced against the use of water, a renewable resource.

(4) Priorization of Resource Conservation

No policy statement by the Alberta Government could be found on the use-priorities of different energy sources where substitution is possible.

(5) B.C. Relations

Although the question of involving the Province of British Columbia has been shelved, earlier studies indicated(coincident with considerable social and environmental costs to British Columbia)sizeable reductions in the costs of producing each unit of electricity for both the Intermediate and High Head designs.

(6) Fairview - Rycroft Railway Link

Some consideration should be given to the possibility of a railway crossing over the Low Head dam structure. Of the possible route alignments, an 18-mile rail link between Fairview and Rycroft seems particularly advantageous.

(7) The Other Option

Consideration may be given to the costs and consequences of a do-nothing policy as an alternative to the hydro-electric dam project.

STRATEGIC RECOMMENDATIONS

That, based on a review of available information, the Northern Alberta Development Council support pressing forward with studies related to the Low-Head Dunvegan hydro-electric development project with an in-service date of 1992.

The following is a summary prepared by the
Northern Development Branch
of

Survey of Metis Settlements

Authored by Peter C. Nichols & Associates Ltd.
Edmonton, Alberta
September, 1979

Sponsored by the Northern Development Branch
and Esso Resources Canada Ltd.

PURPOSE AND BACKGROUND

It has been recognized for some time that the availability of basic socio-demographic information about the Metis people in the Cold Lake region is quite inadequate. The lack of data has frustrated efforts to prepare local economic and community development plans and made it difficult to assess the implications to the Metis of proposed resource projects in the area.

In late 1978, the Eastern Settlements Development Council and the Cold Lake Metis Economic Development Council cooperated to carry out a survey of the Elizabeth, Kikino, Fishing Lake, and Caslan Settlements as well as the Metis living away from settlements in the Cold Lake region. Funding and resource support was provided by the Northern Development Branch of Alberta Business Development and Tourism and Esso Resources Canada Limited.

The total population reached by the survey exceeded 2100, of which slightly less than one-half were Metis living off-settlement and the remainder were settlement members. It is estimated that the survey encompassed the following percentages of the respective settlement populations: Elizabeth, 91%; Kikino, 69%; Fishing Lake, 78%; Caslan, 59%.

This survey report is divided into five sections of identical format covering each of the four settlements and the off-settlement Metis. Only a portion of the survey results are presented in this document, because of the very large number of tabulations and cross-tabulations that are potentially available.

METHODOLOGY

A household survey questionnaire was designed which incorporated in excess of 100 questions. The preparation of the questionnaire took into consideration the information needs of a number of agencies and organizations involved in Metis affairs.

The questionnaire was pre-tested during January, 1979 and the selected interviewers were trained at a two-day workshop. The survey field work commenced in mid-February and was completed over a six-week period. Interviewers attempted to contact all Metis households and to have each member fifteen years of age or older complete a form. A short, supplementary questionnaire was used to obtain basic information about household members who were away at the time of the survey.

After completion of the field surveys, the responses were coded and transferred to computer cards. A computer statistical package was used to tabulate and analyze the questionnaire results.

FINDINGS

The report's findings are a tabulation of survey findings in the form of tables for each of the four eastern Metis Settlements, as well as off-settlement Metis. The findings are divided into the following categories:

a) Family Characteristics - This portion of the survey asked questions about family size, age and sex composition, and marital status.

b) Employment Status - This part of the survey asked questions about employment status, type of work, farm employment and factors preventing employment.

c) Employment History - This section surveys employment history, wage levels, employment referrals and reasons for job separations.

d) Employment Attitudes - This portion of the survey looks at employment attitudes and issues. These include travel, job rotation, and employment preferences.

e) Education and Training - A large section of the report asked questions about education and training. These questions included level of education attained, education interests, and training program involvements. It asked other ancillary questions related to training such as if interviewees owned vehicles, had a valid driver's licence, and were prepared to travel to secure training and employment.

f) Housing Characteristics - Housing conditions were surveyed. These questions included type of house, condition and size. A number of other questions about the facilities in the house were asked.

g) Community Life - Residents were surveyed for a variety of opinions about their community. These questions included areas of potential community improvements, recreation facilities, community group involvement.

h) Supplementary Questions - A final section of the report dealt with family members who were over 15 years old and were absent from the household. The survey asked questions about reasons for absence, type of job or training obtained, and length of employment or training.

RECOMMENDATION

The study provides statistical data about each of the four eastern Metis Settlements. It does not attempt to analyze the data or provide recommendations. The study is aimed at the primary problem of collecting data where none has existed previously.

The following is a summary prepared by the
Northern Development Branch
of

Fishing in Northern Alberta

Authored and Sponsored by the Northern Alberta
Development Council
Peace River, Alberta
October, 1979

PURPOSE OF THE STUDY

The study was an extension of a previous report of February, 1978, entitled "The Commercial Fishing Industry in Northern Alberta" and written in response to briefs presented to the N.A.D.C. The recommendations of the earlier report were retained in this study.

The main purpose of the study was to formulate the basis for a position paper of the N.A.D.C. to be presented to the Alberta Legislature's Select Committee on Fishing in Alberta.

BACKGROUND

The study examines the role of commercial fishing and its relation to the Freshwater Fish Marketing Corporation. Fishing regulations are also examined as they relate to commercial fishing. In addition, recreational fishing and its economic effects, management and regulation are considered.

OBJECTIVES

The overall objective of the study was to assess the problems existing in commercial and recreational fishing and recommend changes for the Select Committee on Fishing in Alberta to consider. The recommendations reflect concerns expressed by northerners through briefs and interviews to the N.A.D.C. Literature from Federal, Provincial and private sources were used to document these concerns.

PRINCIPAL FINDINGS

1. 75% of Alberta's commercial fish production comes from northern Alberta.

2. Alberta's commercial fish production represents only 5% of the total of the Freshwater Fish Marketing Corporation. This small amount leads to difficulties in influencing policies of the Corporation.

3. Commercial fish production in northern Alberta is close to maximum.

4. The income of commercial fishermen who try to make fishing a vocation is low and overhead continues to rise.

5. Association with the Freshwater Fish Marketing Corporation has been of questionable value to northern Alberta fishermen.

6. Recreational fishing is of high economic importance to northern Alberta.

7. Increased pressure from industry, land development, and non-consumptive recreational activities has caused a deterioration of fishing habitat.

8. Only one fish hatchery exists in Alberta; this deters efforts to re-stock lakes or conduct aquaculture.

STRATEGIC RECOMMENDATIONS

1. Alberta should continue membership in the Freshwater Fish Marketing Corporation, but should attempt to bring about:

    - changes to prices and packing fees paid;
    - utilization of rough fish; and
    - changes in policy regarding local sales of fish.

2. Changes must be made to the commercial licencing regulations to limit numbers of fishermen.

3. Provide training for fishermen to increase efficiency of operation.

4. Provide a transportation subsidy through the Provincial government for commercially-caught fish.

5. Encourage aquaculture.

6. Expand the integrated management planning process with a view to:

    - maintaining lake standards;
    - increasing tourist facilities;
    - controlling land development; and
    - making land management a concentrated effort.

7. A preventive approach to maintenance should be utilized instead of rehabilitive approach.

8. Fishing regulations should be changed respecting:

    - spawning time;
    - wild rivers; and
    - equipment.

9. A fish rearing facility should be established in northern Alberta.

10. Surveillance of the effects of resource development must be continued.

The following is a summary prepared by the
Northern Development Branch
of

Day Care in Northern Alberta

Authored by the Northern Development Branch
and Muskwa-Sit Consulting Ltd.
Peace River, Alberta
November, 1979

Sponsored by the Northern Alberta Development Council

PURPOSE OF THE STUDY

The purpose of this report is to examine the present Day Care situation, policy and regulations in order to determine if there are any outstanding problems which are being encountered by communities in the Northern Alberta Development Council area.

SPECIFIC OBJECTIVES

The Northern Alberta Development Council focussed its attention on commun ty-run Day Care centres rather than private operations because of the concerns raised by the communities. This report is an attempt to broadly examine the present Day Care situation and regulations to determine if there are any particular outstanding problems which are being encountered by northern communities. (This understanding is consistent with the legislative act governing the N.A.D.C. when it says the Council's purpose to "investigate, monitor, evaluate, plan, and promote practical measures to foster and advance general development in northern Alberta and to advise the government thereon ...".) The study looks at government funding, area statistics, the old system, and the new system.

PRINCIPAL FINDINGS

1. The complexity of the situation has been compounded because of the recent introduction (July 1, 1978) of the new regulations and policies of Day Care in the province. These policies and funding changes have had dramatic effects on centre budgets.

2. The overall objective of the present Day Care legislation is to subsidize the low-income family rather than the operating deficits of Day Care centres.

3. The major problem is that no realistic capital cost or renovation policy is in effect, which is creating considerable confusion or resentment in northern communities wishing to start, renovate or expand Day Care facilities.

4. Significant fund raising suggestions are not always feasible or possible, as is the case regarding lotteries.

5. Low-income users are subsidized much the same as before, but mid-income users no longer qualify for a subsidy and now must pay the same price for Day Care as high-income users.

6. The formula used for setting Day Care fees is extremely complicated and ultimately linked to social assistance rates.

7. Municipalities must complete all documentation in order to claim 80% of the deficit of low-income users. This creates concern because although the municipality or centre did not set the new rules, they must follow rigid guidelines if they in fact wish to submit a claim. Some centres or municipalities will be hiring a part-time or full-time staff member to complete the necessary on-going paperwork.

8. Quality of care is limited to provincial support. If municipalities are to continue to subsidize centres anywhere near 20%, then it usually means a reduction of staff in the centres compared to previous years.

9. The program discourages occasional and part-time use.

The following is a summary prepared by the
Northern Development Branch
of

Report on the Economic and Technical Feasibility of Extending the Services of Sunwapta Broadcasting Limited to Remote Communities in Northern Alberta

Authored by Paul Goud and Stuart McFadyen
Management Advisory Institute
Edmonton, Alberta
November, 1979.

Sponsored by the Northern Alberta Development Council

PURPOSE

The purpose of this study was to evaluate the economic and technical feasibility of one preferred solution to the problem of providing broadcasting services to isolated communities. Major costing and technical analysis has been focussed on the preferred option, but an attempt has been made to identify the major cost elements and potential limitations of alternative approaches.

BACKGROUND

Inadequate communications facilities and services, in particular television coverage, are problems shared in varying degrees by most rural and remote communities within the Northern Alberta Development Council (N.A.D.C.) boundary. The Council has received a number of requests for assistance in obtaining second and third channel television coverage from communities throughout Northern Alberta.

OBJECTIVES

The Northern Alberta Development Council has attempted to establish some policy objectives as a guideline for future action. Included in these policy objectives is a definition of what is believed to constitute a basic broadcasting service, i.e., a minimum level of service which the Council feels should be available over the air to as many communities as is technically and economically feasible. The idea should be to ensure that all Albertans have access to major programming originating in the province, including the educational broadcasting.

The objective has been to define and cost an economically and technically feasible method of delivering the Sunwapta Broadcasting Limited signal to the northern Alberta coverage areas.

METHODOLOGY

In order to decide on the one preferred solution, three principal alternatives were investigated and defined as follows:

a) An exact Sunwapta replication of the existing CBC Northern Alberta Service.
b) An extension of the existing Sunwapta Broadcasting Limited's Northern Alberta Service.
c) Satellite/Grouard Station Service to Northern Alberta.

PRINCIPAL FINDINGS

Current Services-

Maps I and II illustrate the current television reception available to northern Albertans. A review of the maps shows that CBC coverage provides the bulk of broadcast services. CTV provides services to the following communities: Grande Cache, Grande Prairie, Peace River, Whitecourt, Athabasca, Lac La Biche, St. Paul, Cold Lake and Fort McMurray.

Technological Advancements -

In reviewing the current state of the art, i.e., satellite/earth station transmission, it is believed that the off-air feed/microwave system is somewhat dated, due to capacity and economics. Television transmission via fibre optics would appear to be five or ten years away.

Satellite transmission, on the other hand, has immediate application. Currently, CBC and a number of foreign signals can be accessed by most northern communities. In communities with access to only one television channel, the Federal authorities have chosen not to enforce international agreements intended to regulate the piracy of foreign satellite signals.

At the present time, there is no CTV satellite signal, nor is there a signal originating in Alberta available via satellite. The conclusions reached regarding the three principal alternatives are as follows:

a) An exact Sunwapta replication of the existing CBC Northern Alberta Service. This is technically feasible, but economically wasteful.
b) An extension of existing Sunwapta Broadcasting Limited Northern Alberta Service. This is technically feasible (with some problems of channel availability).

CBC ENGLISH TELEVISION

MAP I

SUNWAPTA BROADCASTING LIMITED
NORTHERN ALBERTA REPEATER STATIONS

MAP II

Capital cost of additional transmitters is estimated at less than $3,000,000. Operating costs are estimated at less than $100,000 per year, plus A.G.T. signal delivery charges.

c) Satellite/Ground Station Service to Northern Alberta. The extreme upper estimate on costs for service to all 125 communities in Northern Alberta at present cost levels of $50,000 each would, of course, bring proportionate reductions in these costs as would expected future reductions in the cost of ground stations.

STRATEGIC RECOMMENDATIONS

The Northern Alberta Development Council is of the opinion that efforts should be made to provide at least two channels of television reception to all Albertans where it is technically and economically feasible. Access to this type of service would improve the quality of life in the north by increasing the recreational, cultural, and educational opportunities of northern Alberta residents. It is therefore recommended:

1. That consideration be given to assistance for the extension of second channel (CTV) television broadcasting in northern Alberta.
2. That all, or a significant portion of, the CBC and CTV broadcast signal emanate from within the Province.
3. That a review of technology be made to determine the most economical method of transmitting second channel services, i.e., satellite/earth station or combination off-air feed/microwave, to northern Alberta.